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Fortnightly Review

War in the Air

THOUSANDS of war planes of all categories from the fastest single-seaters to the mammoth multi-motored bombers stand ready on the airdromes of Europe, ready to take off on lethal missions directed against military and civil populations alike.

Writers have argued heatedly that in the next great struggle between nations the airplane will be the deciding factor, and others have argued just as heatedly that the plane will continue as an accessory to ground troops and these latter writers have pointed to the Spanish Civil War as definite justification of their theory.

AMERICAN AVIATION declines to express an opinion in this argument, but it does contend that the progress of flight in the twenty years since the armistice put an end to World War activities has been such as to make the next major affair an exceedingly active one from the point of view of aviation.

What will be the consequences of a major European war on the United States, and particularly on the aircraft industry of this country? Well, it is our considered if somewhat cynical opinion that in spite of a hard-earned lesson we will not have enough horse sense to stay out of another war. However hard our sincere pacifists may try, there will always be enough clever propagandists to wangle us into combat, although the chances for delaying actual participation are better than average!

But whether or not we allow ourselves to be pushed into war, it will be well for our national leaders to continue to build up our "defensive" air strength in Army,

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CAA Set to Increase Airline Mail Pay Within 30-60 Days

SCRIP CONTINUED UNTIL OCTOBER 17

Filing of Tariffs Is Also Put Off For Two More Weeks

The date for the filing of tariffs by airlines has been postponed for the second time by the Civil Aeronautics Authority from Oct. 3 to Oct. 17. The use of scrip may be continued also up to Oct. 17, pending a decision by the CAA as to whether it is legal and thus may be continued indefinitely.

Meantime the CAA issued regulations (403-A-1) for the filing, posting and publishing of tariffs by air carriers and foreign air carriers and each line must follow these rules when filing the tariffs before Oct. 17. Most of the lines were glad to have an extension of time.

As for scrip, the CAA has not yet tackled this controversial subject and apparently welcomes a joint brief to be filed by the airlines. Judging from unofficial conversations with CAA chiefs, scrip is vulnerable from only one viewpoint: that it is discriminatory.

Various suggestions have been offered as to how scrip could be continued under terms of the Act so that its principal beneficial merchandising features would

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Private Flying Chief



GROVE WEBSTER
Executive Vice-President of the Private Flyers Association, who was recently appointed chief of the private flying unit of the Civil Aeronautics Authority.

CAA Private Flying Unit to Delve Into Wide Range of New Activities

The Civil Aeronautics Authority has made public its definition of private flying, the encouragement and control of which will come under the new private flying section established under Grove Webster.

Under the definition, private flying includes gliding, soaring, inter-collegiate, pleasure, course of business, sport, seaplane, instruction, charter and fixed base, and sales and repair activities.

The new program is not only the first to be undertaken for private flying by a federal agency, but opens a new era of relationships between the private and miscellaneous flyer and the government. It is perhaps significant that the program covers such a wide range of activities.

The scope of the new unit's activity has been outlined as follows:

1. Segregation of records: This, it is expected, can readily be accomplished by a mere change of methods

of keeping figures so that, for instance, accidents caused by student pilots will not be confused with the record of charter operators and others.

2. Interpretation of existing regulations: This is regarded as a task largely of simplification of the regulations as they apply to private flying. It will be the proposal of the unit to reduce them to language more easily understood by the private flyer on the one hand, and to educate the private flyer to the necessity for regulations.

3. Drawing a minimum of new regulations: This will be done through cooperation with private flyers' bodies and regional committees.

4. Develop utility and pleasure value of private flying and its value to other industries: This will include studies of accurate costs, data, use of airplanes in distribution and selling, value to such industries as oil, newspaper, mining, the effect of private

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Immediate Review of Rates Planned; Will Meet Acute Financial Emergencies Existing

UPWARD revision of air mail pay for domestic airlines to a "fair and reasonable" level can be expected within "thirty to sixty days" according to reliable information from the Civil Aeronautics Authority.

The new rates will be emergency or temporary in effect, designed to keep the industry from experiencing a series of bankruptcies, but will not be called by such terms by the Authority. A large-scale comprehensive study of air mail rates will not be attempted until the "temporary" rates are put into effect, the CAA feeling that it does not have the time now to work out a permanent formula of compensation.

This welcome news that a revision of rates is contemplated in the immediate future dispels the fears within the industry that a comprehensive review of rates might be undertaken prior to a revision. Such a review would require from six months to a year and in the meantime certain of the existing lines might be forced into bankruptcy without emergency action.

On the other hand CAA members have let it be known that they do not intend to make the CAA a "governmental Santa Claus" authorizing air mail increases indiscriminately. Each line will be required to provide proof of need before an increase is granted.

How much the increases will total is a completely unknown factor at the present time. The industry itself has suggested the need of \$3,000,000 to \$5,000,000 additional per year, but any statement as to amounts of increases or the formula to be used is decidedly premature. Sole decision to date is to review rates as quickly as possible.

Until these "emergency" rates are granted, most of the lines needing financing find it next to impossible to raise operating capital, and some of them need it badly. With \$3,000,000 in losses for 1937, and an even greater loss in sight for 1938, it is estimated that the industry as a whole will require about \$15,000,000 in new financing during the next two years.

Before a review of rates can be attempted, however, the CAA must first give to each existing airline a certificate of convenience and necessity as provided

by the Act. Up to now the lines have operated with only air mail contracts, a decidedly unstable system of franchise. Under the new law, each is to be given an operating franchise which will give the first semblance of security since air transportation began.

Although the granting of these certificates is considered a formality, hearings will be held to comply with the law. Once each airline has received its certificate, it can apply for a review of air mail rates, and in order to expedite the handling of these applications the CAA probably will group them. Hearings will be held and examination of records will be made, but no attempt at exhaustive auditing of books will be attempted at this time. No swarms of examiners and accountants will be sent to the airline home offices, although spot checking will probably be made.

For the fiscal year 1938 Congress appropriated \$14,500,000 for domestic air mail. For the current fiscal year, 1939, Congress appropriated \$16,250,000. Any increases authorized by the CAA will have to be met in a deficiency appropriation.

"We are going to review the rates as soon as possible," one member of the Authority said. "We're trying to build a new bridge and at the same time keeping traffic moving over the old one—and it's not an easy job. As soon as the present rates are reviewed and increases authorized where necessary, we will launch a very comprehensive study of the entire rate making system and institute permanent rates when this study is completed. But first we will take care of the emergency that exists. We don't want any airline bankruptcies at this stage."

There have been various suggestions for a revised method of air mail compensation. One of these is the pound mile basis, by which the lines would be paid for what they carried. But it is almost a certainty that nothing as radical as this will be attempted in the near future. The CAA does not now intend to institute a new method of payment which may be changed again following the more comprehensive air mail review to be undertaken later.

According to *The Wall Street Journal* all three of the major airlines are in a position to sell additional stock as soon as the outlook is favorable. American Airlines voted at its last annual meeting to increase the authorized capital stock from 500,000 to 1,000,000 shares. At the end of 1937 American had 288,099 shares outstanding and 211,901 additional shares reserved for conversion of debentures. United Air Lines has 1,441,688 shares of capital stock outstanding, of an authorized issue of 2,000,000 shares. TWA has 830,846 shares of capital stock outstanding, of an authorized issue of 1,000,000 shares.

Passenger business has not been up to expectations this year. The slump began in June, and while business has been good on some lines, it is below the anticipated seasonal increase. All lines are concentrating on passenger business at present. Within the CAA there is some feeling that the airlines are not doing a good job promotionally, and there is some feeling also that passenger fares are slightly higher than they should be to attract large-scale business.

National Air Travel Week may stimulate passenger business somewhat, although all companies are handicapped by lack of sufficient funds for advertising. Another favorable factor is the coming New York World's Fair. With air mail pay due to be increased for those lines needing it, and with safety directly under supervision by the CAA, 1939 becomes a favorable outlook. Almost all lines are now operating in the red but a good winter season without accidents would pave the way for a banner year in 1939.

PRIVATE FLYING

(Continued from page 1)

flying on sports development such as fishing and hunting, its possible effect on the decentralization of business.

5. **Promotion of safety:** This will be accomplished through better and more uniform training: It is expected that at the earliest opportunity the unit will produce a study of present military and civilian training methods and suggestions for standard curricula and variations for individual needs. With such standard curricula it is hoped that the requisite number of training hours may be reduced for certain classes of private flyers.

6. **Study of the value of private flying to the military services and the national defense:** This will involve conferences with Army and Navy training authorities and possible study of foreign policies.

7. **Study of possible revision of approved type certificates for private flying ships and their maintenance requirements:** This is expected to meet the complaints of numerous manufacturers that application of transport requirements to private planes unduly increases their cost.

8. **An effort to bring about uniformity between state and Federal regulations on private flying.**

"These activities," the announcement said, "are in line with the general policy of the Civil Aeronautics Act of 1938 for the encouragement and promotion of civil aeronautics as they are applied to the private flyer. It is emphasized that the success of the program will be sought through the fullest measure of co-operation with all groups involved in private flying, other branches of the industry, the military services and the Authority itself."

SCRIP

(Continued from page 1)

not be lost. One suggestion has been made that the airlines retain the credit system but put a general rate reduction of 10% or 15% into effect, giving all passengers the benefit of reduced rates but retaining the credit feature for the benefit of frequent users of air transportation and employees of corporations.

Another suggestion is that an insurance company be established jointly by all the lines to pass on credit of scrip card holders, but it is not at all certain that this plan is either feasible from a practical standpoint or legal under the Act. Evidently the CAA as yet has no concrete idea on how it will act on the matter when it comes up for final action. Opponents to scrip are travel agents who are unable to collect commissions on tickets sold with scrip cards and who receive no commission on scrip sold to corporations. Some travel agents have indicated that should the CAA declare scrip to be legal in its present form they would file suit in court.

CAA members are aware that scrip has been the best merchandising scheme created so far to sell air transportation and that it has many meritorious features. Yet, under the Act, there can be no discrimination on rates, and the scrip card entitles the holder to a straight 15% discount on fares. The credit system is probably not illegal.

In a recent newspaper column Boake Carter strongly defended the scrip system, giving credit to American Airlines for starting the idea and asserting some of the other lines were for discontinuance of scrip because American had succeeded so well with it.

AIR SAFETY BOARD APPOINTS STAFF

Will Investigate Accidents, Recommend Preventive Measures; W. S. McDuffee Named

The Air Safety Board of the Civil Aeronautics Authority has announced appointments to a small special staff which is to assist in the investigation of accidents and studies leading to recommendations of measures designed to prevent their recurrence. The new appointments, which are of an administrative character for the Washington office, are as follows:

William S. McDuffee, of Fort Worth, Tex., has been named acting executive director of the board. He is a war-time veteran of the Air Corps, and is well known throughout the southwest as a former executive of Bowen Air Lines and other business enterprises.

Louis R. Inwood, who was an examiner for the former Bureau of Air Mail of the Interstate Commerce Commission, is acting as McDuffee's assistant.

Darrell T. Lane, of Salt Lake City, has been appointed assistant general counsel to the Authority and assigned to the Safety Board as its general counsel. Lane practiced law in Salt Lake City, and has been a member of the Mexican Claims Commission.

Jesse W. Lankford, chief of the accident analysis section under the former Bureau of Air Commerce, has been transferred to the safety Board, together with his staff.

Fred M. Glass, of the general counsel's office, has been transferred to the Safety Board as examiner.

William F. Centner, formerly manager of the Port Columbus Airport, Columbus, Ohio, is serving the board as aircraft accident investigator.

Robert D. Hoyt and **Phil C. Salzman**, veterans of the aeronautical inspection section of the BAC, have been transferred to the Board as aeronautical inspectors.

Walter S. Stapler, of Georgia, has been named senior air safety investigator.

Roland Rohlf, of New York, was appointed principal aeronautical consultant.

Perry Hodgkins is serving as air safety investigator.

John Foscoe, of Alabama, is the administrative assistant of the Board.

Harlee Branch Gets

Longest Term on CAA

Terms of appointments of members of the Civil Aeronautics Authority have been made known. Harlee Branch was appointed for six years, Robert Hinckley five years, Oswald Ryan four years, G. Grant Mason three years and Edward J. Noble, the chairman, two years. The administrator, Clinton M. Hester, was not appointed for any set term of office, there being no term provided for in the Act.

Northwest Cuts Fares

As a result of reduction in rates put into effect by Northwest Airlines Oct. 1, savings as high as \$28 on round trips between Washington, D. C., and Pacific northwest cities will be possible. Washington-Seattle round trip rates are now \$196.80 instead of \$224.80 and the Spokane-Washington rate is \$178.80 instead of \$202.80. Northwest connects at Chicago with other services to the east.

UNITED'S 12th Anniversary of flying on the Pacific Coast



From pioneer flying . . . to one of the finest, most modern air services in the world

ON SEPTEMBER 15, 1926, the first air mail schedule was started over the 1200-mile airway between San Diego and Seattle.

Since that day, United's service has progressed from pioneer flying under the most severe handicaps, to one of the finest, most modern flying operations in the world.

28,000,000 miles have been flown and 350,000 passengers carried over this border-to-border air route. Now giant, 21-passenger Mainliners link Los Angeles and San Francisco in two hours . . . reach Portland in four hours more, Seattle in five!

UNITED AIR LINES

THE MAIN LINE AIRWAY

Wirt Scruggs Leaves TWA to Go with EAL

Wirt P. Scruggs, for two years assistant to Jack Frye, president of TWA, with offices in Washington, D. C., has resigned effective October 1 to become Washington representative for Eastern Air Lines.



Scruggs

Scruggs is one of the oldest employees in point of service on TWA. On November 1 he would have been with TWA and its predecessor companies 10 years. He was the second person employed by the original company's traffic department. For six years Scruggs has been in Washington, D. C., handling the company's relations with government agencies. For several years he was assigned to Paul Richter, now vice president in charge of operations for TWA, and two years ago he was appointed assistant to the president.

TWA has lost both of its Washington men in the course of a month, A. Martin Logan having resigned as national executive representative to become executive representative and special assistant to the president of American Airlines.

NASAO MEETING

Annual Convention to Be Held in Omaha Oct. 13-14-15

Omaha, Nebr., Sept. 22—Final plans were being whittled into shape for the annual convention of the National Association of State Aviation Officials to be held here Oct. 13-14-15. General chairman will be Col. Floyd Evans, director of aeronautics for Michigan and retiring president of the association. Local hosts will be the Nebraska Aeronautics Commission.

Among the scheduled speakers are Governor Frank Murphy of Michigan; Col. Edgar S. Gorrell, president of the Air Transport Association; Clinton M. Hester, Administrator of the CAA; Representative John Dingel of Michigan; Mrs. Mabel Walker Willebrandt, former U. S. assistant attorney general; Dr. Raymond Staub, of Portland, Ore.; Dr. Irving Langmuir, Private Fliers Association; Lewin Barringer, holder of world soaring records; Moss Patterson, of Oklahoma City; Robert Aldrich, of Troy, N. Y.; and Willard Fletcher, of Providence, R. I.

CAA Rents More Space

Space has been rented by the Civil Aeronautics Authority in two more Washington buildings, because of the cramped quarters in the Commerce Building. The airways operations and airways engineering divisions have moved into the Stanley Horner Building at 1015 14th St., N. W., and the certificate and inspection division will occupy part of the Capital Wall Paper Building, 12th and Eye Sts., after Oct. 1. The Safety and Planning division was moved to the Garfinkel Building, 14th and G Sts., during August.

Patterson Better

W. A. Patterson, president of United Air Lines, is recovering from an accident occurring during a ping pong game when he fell and broke one leg in two places. With the aid of crutches he has been going to his office every day.

Air Safety Board to Discuss Plans For Winter with Pilots, Operators

In a drive for a winter without airline accidents, the Air Safety Board and the administrator of the Civil Aeronautics Authority will meet with the airline pilots on Oct. 4 and the operations committee of the Air Transport Association on Oct. 5 to complete the most comprehensive safety program so far devised jointly by the airlines and a federal agency.

Under the chairmanship of Ralph Damon, vice-president in charge of operations for American Airlines, the operating chiefs of the domestic airlines met in Chicago Sept. 23 and 24 to draft a specific program to supplement the general program adopted following the joint meeting of the CAA and the industry in Chicago early in the month. These specific proposals will be submitted to the Air Safety Board, composed of Col. W. Sumpter Smith and Tom Hardin, at the meeting Oct. 5.

Meanwhile the board members and the administrator met with operations chiefs of Pan American Airways

and Pan American-Grace in New York on Sept. 26 to map a safety program for the foreign lines.

All conferences are being held jointly with the safety board and the administrator in order to save duplication of effort and meetings. Thus the board's activities and those of the inspection service will be coordinated to avoid confusion.

The present plan is to have the airlines submit their own safety program for approval by the safety board. In general this program calls for elimination of speed competition among rival lines, to raise weather limitations if found desirable, and other factors tending to aid safety. It is expected that the ATA committee headed by Damon will establish close working relationships with the safety board and that as far as possible the airlines themselves will take the initiative to remedy any defects in the safety program without the necessity of rigid enforcement and regulation by the board.

Feeder Airline Demonstration Will Feature Conference at Kansas City

Kansas City, Mo., Sept. 20—As a feature of the 3-day National Air Mail Feeder Conference to be held here Oct. 6-7-8, a feeder airline demonstration will be held with the co-operation of cities and towns within a 400-mile radius of Kansas City. The test is a voluntary operation of proposed small transport services carrying passengers and express. More than 200 localities in 7 states have been invited to participate.

A number of 4 to 10-passenger modern planes have been secured, including a Spartan Executive, Stinsons and Wacos. Passengers will be carried to Kansas City at a rate of 10 cents per mile. Sponsored by the local chamber of commerce, the project is a prelude to a vigorous campaign to secure air mail service for a series

of feeder airlines serving the mid-west area. The demonstration has been arranged by Clarence R. Mooney, aviation secretary for the chamber.

A large number of speakers have been lined up for the three days of the conference, including government officials and representatives of aircraft manufacturers interested in supplying ships, for feeder airlines. The conference is sponsored jointly by the local chamber and the Southwest Aviation Conference. Complete reports will be sent to both the Civil Aeronautics Authority and the Post Office Department. Among the speakers will be Clinton M. Hester, Administrator of the CAA, and Moss Patterson, of Oklahoma City, president of the Southwest Conference.

N. A. A. Meets in St. Louis

The 1939 convention of the National Aeronautics Association will be held in St. Louis next January. Dates have not been fixed but city and state officials have extended invitations. Oliver Parks, president of Parks Air College at East St. Louis, Ill., a member of the NAA executive committee, and George B. Logan, NAA official of St. Louis, were instrumental in arranging the convention city. The last convention was in Cleveland.

Taylor Pushed

Jimmy Taylor, well known test pilot of New York City, has been recommended to President Roosevelt as the third member of the Air Safety Board of the Civil Aeronautics Authority, it has been learned. There is no indication as to when the President will fill the vacancy or as to his wishes, but Taylor has received official backing from within the C.A.A. It is believed that his experience in test flying every type of aircraft, large and small, would provide necessary technical background for the board. His appointment would also be a recognition of private and miscellaneous flying as well as manufacturers.

British Flights Postponed

Observers at Port Washington state there is little likelihood the British will schedule more flights over the North Atlantic this season.

Memphis Dedication Oct. 15

Memphis, Tenn., Sept. 15—The administration building at Municipal Airport here will be dedicated on October 15, it was announced yesterday.

Aviation Calendar

October—NAA Convention, St. Louis.
Oct. 1-9—National Air Travel Week.
Oct. 4-5—Tenth Anniversary of Air Progress, Orlando, Fla.
Oct. 6-8—National Air Mail Feeder Conference, Kansas City, Mo.
Oct. 12—Aeronautical Section, Meeting with National Safety Council, Hotel Stevens, Chicago.
Oct. 13-15—Annual Meeting, National Association of State Aviation Officials, Omaha Air Carnival, Omaha, Neb.
Oct. 23-25—National Rotating Wing Aircraft Meeting, sponsored by Philadelphia Chapter, Institute of Aeronautical Sciences, at Franklin Institute, Philadelphia.
Nov. 13-Dec. 4—16th Annual Aeronautical Show, Paris, France.
Jan. 6—Midyear Meeting, Florida Aviation Association, Miami, Fla.
Jan. 6-8—11th Annual All-American Air Maneuvers, Miami, Fla.
Mar. 2-4—Southwest Aviation Conference, Fort Worth, Tex.

AIRPORT ADVISORY COMMITTEE NAMED

Many Federal Agencies Represented on Group to Aid Airport Survey

An advisory committee of 21 persons to aid in the National CAA airport survey was appointed Sept. 24 by Clinton M. Hester, administrator. First meeting of the committee is to be held in Washington Oct. 4. The airport survey is to be completed by Feb. 1.

One significant feature of the committee is the inclusion of Thomas H. MacDonald, chief of the Bureau of Public Roads, who long has been interested in the development of airports as an adjunct to highway building, but who has found little receptivity to such a co-operative idea before the Civil Aeronautics Authority was created. Composition of the committee is diversified.

Those named are: Charles E. Parker, vice-president of the Aeronautical Chamber of Commerce.

Edward G. Hamilton, Washington representative, Air Line Pilots Association.

Col. Floyd E. Evans, state director of aviation for Michigan and president, National Association of State Aviation Officials.

Earl D. Mallory, American Municipal Association.

Rear Admiral Arthur B. Cook, Chief, Bureau of Aeronautics, Navy Department.

Paul V. Betters, executive director, U. S. Conference of Mayors.

Brig. Gen. H. H. Arnold, Acting Chief, Air Corps, U. S. Army.

Capt. L. T. Chalker, Chief Aviation Officer, U. S. Coast Guard, Treasury Dept.

Charles F. Horner, president, National Aeronautics Association.

Lieut. Col. F. C. Harrington, Chief Engineer, Works Progress Administration.

Thomas H. MacDonald, Chief, Bureau of Public Roads, Department of Agriculture.

C. E. Rightor, Chief Economic Analyst, division of statistics of cities, Bureau of Census, Commerce Department.

Major Gen. Albert H. Blanding, Chief, National Guard Bureau, War Department.

Charles W. Elliot, 2d. Executive Officer, National Resources Committee.

Charles P. Graddick, Superintendent, Air Mail Service, Post Office Department.

Major John Berry, Manager, Cleveland Municipal Airport, Cleveland, O., president, American Association of Airport Executives.

Lieut. Col. Richard Aldworth, Manager, Newark Municipal Airport, Newark, N. J.

O. M. Mosier, vice-president, American Airlines, chairman of airport committee of the Air Transport Association.

Morris A. Copeland, Executive Secretary, Central Statistical Board.

A. R. Stevenson, Jr., president, Private Fliers Association.

Balthasar H. Meyer, Acting Chairman, Interstate Commerce Commission.

Never before have so many different government agencies been included in advisory committees pertaining to aviation.

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**MID-CONTINENT
AIRLINES**

CAA Secretary's Office Being Organized for Maximum Efficiency

New Planning and Procedures Division Is One of 5 Which Replace BAC Administrative Section

Organization of the C.A.A. secretary's office into five divisions, designed to provide maximum operating efficiency to all departments of the Authority, is under way and will be completed as rapidly as possible, according to Paul J. Frizzell, coordinator and secretary of the C.A.A.

The five divisions, which are essentially Frizzell's idea, are as follows: planning and procedures, budget and accounts, personnel, office service, and records. They will take over the sections and personnel of the former Bureau of Air Commerce administrative division. However, because the C.A.A. is a separate and complete government establishment, additional personnel will be needed for proper operation.

Austin J. Naylor, who has been connected with the budget and accounts section of the Veteran's Bureau for 14 years, lately serving as assistant budget officer, has been appointed head of the similar section in the C.A.A. secretary's office. John S. Collins, chief of the former administrative division of the BAC, is heading the office service section. Sam Kemp, Frizzell's assistant, has been handling personnel matters.

Undoubtedly the most interesting of the new divisions, although not new in government circles, is the planning and procedures. Personnel of this division could properly be called "why" men, Frizzell said. They will give no orders, but will visit all sections of the C.A.A., investigating methods used, seeking duplication of effort, etc. Their findings will be reported to the secretary's office, from which orders concerning changes will be issued.

Among other things this division will: "direct, supervise and be responsible for the coordinating and reviewing of all procedural planning policies and work of the C.A.A., Administrator's office and the Air Safety Board.

"have final review of all organizational and procedural policies and plans before installation and before presentation to the coordinator and secretary.

"review, edit and coordinate all proposed orders, rules and regulations, and instructions relating to or affecting organization, function and procedures prior to issuance, primarily for the purpose of determining their administrative feasibility."

The records division, which will keep an accurate check on all correspondence, will have three sections: dockets, agenda and minutes, and a central file. It is now functioning in skeleton form and should be completed shortly, Frizzell said.

Under dockets will be filed all correspondence and records that come into the secretary's office; agenda and minutes will handle all matters that are to be taken up at the various C.A.A. meetings and also those that have been considered, while the central file will take care of all correspondence outside of the secretary's office.

Discussing the dockets section, Frizzell stated, "We must set up a method for routing matters quickly to the various C.A.A. divisions concerned and then back to dockets again for final action. A central file, too, can be of invaluable aid, if handled properly. For instance, if it is necessary to secure all information on any one subject, we should be able to get it in that section without going to each individual branch of the C.A.A."

Douglas L. Cullison on Airport Survey

Douglas L. Cullison, consultant and research technician, will head the analytical staff to digest and analyze the data compiled by the survey section for the extensive airport survey undertaken by the Civil Aeronautics Authority. The survey is to be completed by the end of this year for a report to Congress not later than Feb. 1. The field survey is in charge of Major A. B. McMullen, chief of the airport section, with Richard C. Gazley, chief of the division of safety and planning, supervising the entire project.

Mr. Cullison was consultant to an English banking group studying the Mexican Railway, was principal economist to Distributors Group, Inc., New York City; head research technician for the National Resources Committee, and has served in numerous other capacities requiring research work, particularly in transportation.

For several years he was special assistant to Joseph B. Eastman, Federal Coordinator of Transportation during which time he was in charge of economics of civil air transport and adequacy and need for municipal airports. His report was never made public. At that time he attempted to show that the costs of all airport construction in the country, even costs for airports not being served by airlines, should be charged up as government subsidy to airline operations.

Austin Schedules Show

Austin, Tex., Sept. 18—This city will observe National Air Travel Week with an air show and flyers' meeting Oct. 2.

Lufthansa Observers



Horst Lenz (left) and Kurt Schulz, officers of Deutsche Lufthansa and engineers on the trans-Atlantic catapult ship, Friesenland, were snapped as they boarded a TWA skylub at Chicago for a flight to New York recently. They spent several days in Chicago and other TWA on-line cities studying American air transport methods.

Des Moines Asks Route

Des Moines, Ia., Sept. 22—Parks Commissioner Lee Keyser and local officials are opening a campaign to obtain daily air service for passengers and mail between this city and St. Louis, and will pledge aid to southeastern groups seeking St. Louis-Nashville operations.

Norton Helps CAA

Garrison Norton, of the accounting firm of Arthur L. Young, 1 Cedar Street, New York City, has been serving as a consultant to the secretary of the Civil Aeronautics Authority. His work is of a temporary nature directed to suggesting procedures and coordination of the Authority's activities.

Kemp Assists Frizzell

Sam Kemp, formerly connected with the airport section of the Bureau of Air Commerce, is now assistant to Paul J. Frizzell, coordinator and secretary of the Civil Aeronautics Authority.

Metallurgists Forecast Big Gain In Steel for Plane Construction

A vast increase in the number of all-steel planes is prophesied by metal experts, according to the trade magazine *Steel* (Cleveland, O.) in its Sept. 5 issue. "Steel mill metallurgists, working to perfect new aircraft metals, believe they have a suitable material in the stainless steels now available, reliable welding processes and greater technological knowledge," it says. "They predict that within a few years stainless steel will hold the center of the stage in aircraft construction. They visualize the all-steel airplane as common as the all-steel automobile."

Wood and steel are about on a par as to the combination of density, strength-density ratio, and modulus-density ratio, so that choice of material must be based on other considerations, such as ease of fabrication, corrosion resistance, availability, reliable information based on structural tests and a knowledge of design which best will utilize particular application of the materials, the article states.

Advantages of steel and its alloys include light weight, high corrosion and heat resistance, low magnetic permeability, excellent thread cutting properties, reliability of welds, ma-

I.C.C. Cancels Pending Airline Rate Reviews

The Interstate Commerce Commission, acting in accordance with section 1108(b) of the Civil Aeronautics Act, recently issued an order dismissing eight pending dockets, retaining only those which concern the determination of rates for the transportation of air mail. Section 1108(b) states that only these latter cases which are pending shall continue on the calendar "as if this Act had not been enacted," and this automatically cancels all other proceedings.

Following is a list of the dismissed dockets:

A.M.D. No. 8—North American Aviation, Inc., Rate Review, 1935-1936.

A.M.D. No. 15—North American Aviation, Inc., vs. American Airlines, Inc.

A.M.D. No. 30—TWA, Inc., Rate Review, 1935-1936.

A.M.D. No. 40—Varney Air Transport, Inc., Varney Speed Lines, Inc., Rate Review, 1934-1937.

A.M.D. No. 42—Northwest Airlines, Inc., Rate Review, 1936-1937.

A.M.D. No. 43—In Re Rates for Northwest Airlines, Inc.

A.M.D. No. 44—American Airlines, Inc., Rate Review, 1936.

A.M.D. No. 45—United Air Lines Transport Corp., Rate Review, 1934-1936.

Seven rate cases still remain on the I.C.C. calendar and action on some is expected in the near future. Status of the dockets is as follows:

A.M.D. Nos. 1-16-18—Air Mail Compensation. A proposed report will probably not be released in this case. The Commission proceeding directly to the final report.

A.M.D. Nos. 17-36—TWA, Air Mail Rates for Route 2. Briefs have been filed, but a proposed report has not been issued to date.

A.M.D. No. 28—North American Aviation, Change in Base Mileage. Proposed report issued and before the Commission for final ruling.

A.M.D. No. 29—Continental Air Lines, Inc., Rate Readjustment. Proposed report issued and exceptions filed.

A.M.D. No. 32—Air Mail Rates for Route 26, operated by Hanford Airlines, Inc. Proposed report before the Commission.

A.M.D. No. 38—Western Air Express, Base Rate Mileage. Exceptions to proposed report due Oct. 1.

A.M.D. No. 47—Wyoming Air Service, Rate Readjustment. Briefs due Oct. 15.

The TWA dockets, which have been up for hearing several times in the past year, will probably be the last ones to be settled by the Commission.

PROGRESS AT K. C.

Runway Paving Moves Fast, Work on Terminal to Start

Kansas City, Mo., Sept. 20—The first step in the improvement program on Kansas City Municipal Airport is nearing completion. Paving of the north-south runway with eight inches of concrete will be completed before Oct. 1. Next month work will start on the northeast-southeast runway, followed by the east-west runway. Some 1,500 WPA workers are doing the job.

Work on the \$250,000 new passenger terminal will start in 10 days. It will replace the present crowded structure. Other improvements are also to be made, according to Charles D. Daily, airport manager.

AMERICA'S FIRST AIRCRAFT INSURANCE GROUP

has

Four Active and Five Inactive Pilots on its staff

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INCORPORATED

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Lots of Room in this Two-Passenger Cabin

Two big six-footers are accommodated comfortably in this trim, fully upholstered cabin! Doors and steps on both sides provide easy entrance and exit. All windows slide open for ventilation. Large luggage compartment. Ample space beneath seat for batteries or radio. All controls grouped for easy manipulation and extra leg room.

For Only \$425 Down You Can Get a CUB & Learn to Fly FREE!

Every purchaser of a new Cub is entitled to a free flying course, including dual flight instruction by a government licensed instructor. Get a new Cub for only \$425 down and learn to fly your own plane without paying a cent for dual instruction. See the new Cubs at your dealer's and ask for a free flight demonstration...Trainer \$425 down, Sport as low as \$465 down, Coupe \$665 down.



COUNT THE CUBS

THE WORLD'S FASTEST
SELLING AIRPLANE

The Finest Light Plane Ever Built . . . the New 1939 CUB COUPE with Side-by-Side Seating

MEET the newest member of the Cub family—the 1939 Cub Coupe! Bigger, faster, roomier and more luxurious than any other plane in its price class, it is the finest light plane ever built! And it is completely equipped. With plenty of room for two, side-by-side, this new Cub Coupe is the answer to your demand for a super-quality, low-priced, companionable ship.

Offered with the 50-horsepower engines for which it was expressly designed, the Cub Coupe handles its 1200-pound gross load easily, economically and safely—with 90 miles per hour performance. Now perfected hydraulic brakes enable the ship to be maneuvered smartly and safely in limited space. Completely streamlined landing gear minimizes wind resistance. Standard equipment includes Goodrich air wheels, hydraulic brakes, hydraulic landing gear, smart wheel pants, full-swivel tail wheel, compass, air speed indicator, navigation lights and battery, and 15-gallon tank.

No other side-by-side type plane at anywhere near its price offers such smart appearance, roomy comfort, complete equipment, splendid performance and safe, easy handling. Only \$1995 F.A.F. Lock Haven, Pa.—or \$665 down with easy monthly payments.



card, if you wish. Piper Aircraft Corp., 108 V Street, Lock Haven, Pa., U.S.A. . . . Cub Aircraft Co., Ltd., Copenhagen, Denmark and Cub Aircraft Ltd., Hamilton, Canada.

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Send today for catalog on the new Cub Coupe and other models, the free flying course and name of your Cub dealer. Paste coupon — or write your request — on penny post

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Please send me your free catalog on the new Cub Coupe and other Cub models, full details on the free flying course and name of my Cub dealer.

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NON-SCHEDULED Aviation

New Cessna Cruises at 143-MPH, Flies 15 Miles on Gallon of Fuel

Cessna Aircraft Co., in announcing its Airmaster for 1939, reveals an even more efficient craft aerodynamically than that introduced last year. The 1939 model cruises at 143-mph. at sea level with four persons, but uses only 75% of the Warner Super Scarab's 145-hp. Gasoline consumption is about 1 gallon to each 15 miles, according to the manufacturer. Deliveries are now being made.

Gross weight is 2,350-lbs., useful load is about 1,000-lbs. Ample poundage for both baggage and extra equipment is available. Standard equipment includes wing-mounted Hodge wind driven generator, Eclipse direct drive starter, battery, Curtiss fixed pitch metal propeller, radio bonding, Grimes navigation lights, ammeter and the following Kollsman instruments: tachometer, altimeter, airspeed indicator, compass, oil pressure and oil temperature.

The fuselage is of chrome molybdenum steel tubing. The forward portion is aluminum alloy covered. The entire structure is seaplane corrosion-proofed, so that floats may be installed without other preparation.

The wing is of full cantilever construction, and is fabric covered. Structure consists of two solid laminated spruce spars rigidly braced in torsion with deep drag trusses and double drag wire bracing. Leading edge and tips are plywood covered. The aluminum alloy split type wing flap located just forward of the rear spar is actuated electrically. The flap stops automatically in full extended position or it can be lowered to any increment of this position by means of the pilot switch. "Including added lift and amply sufficient drag, the flap possesses the remarkable characteristic of not altering the longitudinal trim of the airplane when extended," the manufacturer announces.

"The entire tail group is also full cantilever. The elevators and rudder have steel structure, the rudder being actuated by cables and the elevator by a push-pull tube."

Tread of the cantilever landing gear is 87-in., and Goodyear 7:50x10 hydraulic brakes are employed. Full spring action for the entire 6-inch oleo travel insures a fully extended strut on each landing. A tail wheel lock can be released to allow full swivel when the pilot so wishes.

Molded Plexiglass windshield is unobstructed by structural members through an entire 180 degrees and the windows have been curved to allow maximum vision through the sides of the cabin. Dual controls are standard. The instrument panel is indirectly lighted and additional instruments may be installed without difficulty. There are four cabin ventilators.

The motor is mounted on a detachable engine mount which is suspended

at the one-piece, stainless steel firewall. Tankage is 35 gallons, but provision is made for 45 or 52½ gallons. The gasoline gauge operates electrically. Useful load is about 1,000-lbs.

Specifications and performance figures as announced by the company follow:

Wing span	34-ft. 2-in.
Overall length	24-ft. 8-in.
Overall height	7-ft.
Wing area	191-sq. ft.
Empty weight	1,380-lbs.
Gross weight	2,350-lbs.
Wing loading	13-lbs./sq. ft.
Power loading	16.2-hp./hp.
Maximum speed	162-mph.
* Cruising speed (8,200-ft.)	151-mph.
* Cruising speed (sea level)	143-mph.
Landing speed	49-mph.
Rate of climb	1,000-ft. 1st min.
Service ceiling	18,000-ft.
Cruising range	525-785 miles
* 75% power.	

Pitt Show Draws 50,000

Pittsburgh, Pa., Sept. 12—More than 50,000 attended an air show held yesterday under sponsorship of Pittsburgh Press. Al Williams, Emil Kropf, Webb Magly in an Abrams aerial survey ship, Lloyd Santmeyer in a stunt Cub, Neil McCray in a Stinson, appeared on the program. Swance Taylor was master of ceremonies. Displayed were a 1908 Bleriot, a Ford tri-motor transport, and a TWA sky sleeper.

20,000 to Air Show

Grand Rapids, Mich., Sept. 12—A two day free airshow sponsored by the local NAA chapter closed yesterday. Attendance was about 20,000. Don Scott, Grand Rapids, won a race for lightplanes; J. G. Vinkemulder, president of the chapter, gave a glider exhibition, and Dick Randolph, of Akron, O., and Helen Montgomery, Detroit, also appeared on the program.

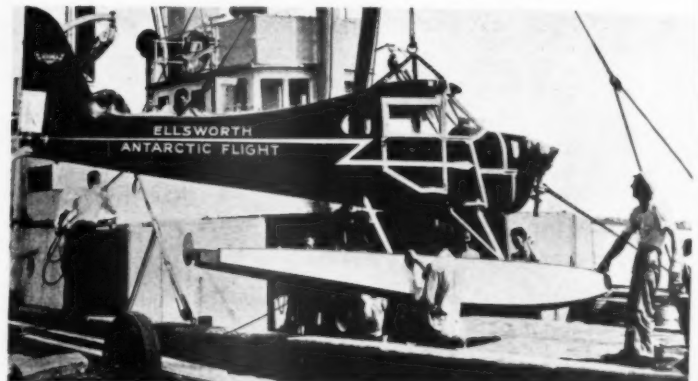
Ray Booth Appointed

San Diego, Cal., Sept. 19—Ray Booth, chairman of the San Diego Junior Chamber of Commerce's aviation committee, has been appointed chairman of a similar committee of the State Junior Chamber. He is also serving on the national committee for aviation of the U. S. Junior Chamber of Commerce, and is a member of the San Diego board of air control.

Operators' Group Elects

Los Angeles, Sept. 13—C. F. Lienesch, veteran California pilot has been elected president of Non-Scheduled Aviation, Inc., recently formed to unify non-scheduled aviation interests in this vicinity. Bertrand Rhine, also of Los Angeles, is treasurer.

Aerona Goes Down Under



This Aerona shown as it was hoisted aboard the Lincoln Ellsworth expedition ship recently at Floyd Bennett Airport Pier is believed to be the first lightplane taken for use in either arctic or antarctic exploration work. The Sea Scout is a standard production model equipped with two doors, navigation lights, a special compass and clock. The exhaust stacks, preheater and cabin heater and exposed metal parts are metallized to resist corrosion, and stainless steel wires and cables are used. The expedition, led by Lieut. Comdr. Ellsworth and Sir Hubert Wilkins, will explore Enderbyland in the antarctic. A Northrop Delta cabin monoplane also was taken.

Fairchild Issuing Used Plane List for Agents

Hagerstown, Md., Sept. 16—Fairchild Aircraft Corp. has attacked the growing problem of plane trade-ins with decision to publish in its twice a month mimeographed bulletin to dealers lists of used ships which are available. All correspondence, however, must be carried on through the dealers concerned and not through the factory.

"There are about 400 Fairchild 24's owned and flown in the United States," the firm reports. "It is logical, therefore, that the owner of a two, three or four year old 24 is an excellent prospect for a new model. Most important is the fact that his present ship represents a sizable portion of the payment for a new one. On the other hand there are plenty of prospects for used 24's at a good price. If the dealers could get together it would result in the sale of a new ship for the factory. Nor is the picture confined only to 24's. It applies to other trade-ins; Wacos, Stinsons, Cessnas, Monocoups."

According to the plan, each dealer and distributor will send in on the 10th and 25th of each month the used planes he wishes listed, giving an "absolutely accurate description" of each, and quoting the "absolute rock-bottom price desired." Prices are to be kept confidential by all recipients of the listings so that quotations may be made to include service costs or a small profit.

In advising the dealers, the firm advises: "(1) Don't try to sell a ship located across the country; (2) always advise the original seller the price you have quoted, in case of direct correspondence with a prospective purchaser; (3) never quote a lower price to some other dealer's prospect unless you want to compensate him on the same percentage basis; (4) keep profits down; 5% override should be ample in most cases; (5) if you are advertising your ships in trade journals, give the advertised price as well as the rock bottom price in the listing you furnish; (6) list only good planes."

Plan Show at Shreveport

Shreveport, La., Sept. 15—T. B. Herndon, state president of the National Aeronautic Association, last night announced plans for a statewide air show here in December. Herndon addressed a joint meeting of the N. A. A. and the W. N. A. A.

T. E. Walsh Honored

Grand Rapids, Mich., Sept. 9—More than 250 friends of Thomas E. Walsh, manager of Grand Rapids Airport, attended a testimonial dinner given in his honor last night by the local chapter of the National Aeronautic Association. Among those who lauded Walsh for his work in developing the airport were C. Bedell Monro, president of Pennsylvania-Central Airlines; Col. Floyd Evans, Michigan state director of aeronautics; C. V. Burnett, manager of the Detroit City Airport; John W. Dregge, chairman of the aviation committee of the board of supervisors, and L. P. Arnold, vice-president of PCA.

40 Ships Tour Mississippi

Jackson, Miss., Sept. 12—Plans for the 2nd annual state air tour are already being made for 1939, according to L. J. Folse, director of the state planning commission, who envisions an armada of 100 planes. More than 40 ships and 150 persons participated in this year's successful circuit over Mississippi and Tennessee.

Continue Ground School

Utica, N. Y., Sept. 13—The board of education tonight voted \$1,500 for continuation of the New York State aviation ground school here at least until Jan. 1. WPA will withdraw financial support Oct. 1. Jack Wright is supervisor.

To Tour Europe by Air

New York, Sept. 21—Don Wilson, sales engineer of Fairchild Aviation, Inc., export division, Jamaica, N. Y., is sailing on the Queen Mary to visit 17 countries in Europe. His Ranger powered Fairchild demonstrator was crated by Heaney Laboratories at Roosevelt Field, and will be used on the tour.

Florida Tour to N. Y.

Miami, Fla., Sept. 13—John L. Morris, general manager of the Miami Chamber of Commerce, has announced that members of the annual Florida air tour will sponsor an air tour to the New York World's Fair next year instead of having the usual tour around the state. He believes the costs will not be increased and that 50 or 60 planes will make the trip.

Cessna Introduces 1939 Airmaster



Seaplane Landings on Turf Made with Stock Floats, Official Says

College Point, N. Y., Sept. 12—George B. Post, vice president of Edo Aircraft Corp., today revealed that the Edo floats with which Mike Murphy made spectacular landings and take-offs on land at the Cleveland Air Races were standard equipment, model 1140, on which Murphy's type ship, (50-hp. Piper Cub) is licensed. The only variation, Mr. Post said, answering inquiries which have come from all over the country, was the addition of a special steel rubbing strip which was machine-screwed on the outside of the normal dural keel to prevent too rapid wear. The executive believes this was the first public demonstration of a land take-off with a seaplane.

"Aside from demonstrating the sturdiness of the equipment, I feel that these tests clearly showed the safety features of seaplane flying over land, which I do not think are generally recognized," he said. "Knowing that he could land safely on land, for instance, might well prevent a pilot from desperately attempting to turn back to water in the event of a forced landing just after take-off with the consequent risk of a serious crash."

Mr. Post believes a seaplane is as safe as a land plane when flying over land (probably safer, he suggests) because (1) in the event of a forced landing on an airport or in good country the seaplane can land without suffering damage, and in many cases can later take-off; (2) in a forced landing in rough terrain the seaplane is less likely to nose over than the land plane, and thus less likely to be damaged or cause personal injury; (3) in a forced landing in impossible areas, or during an

New 90-HP Sport Plane



Two Views of the Beco Model L-5

actual crash anywhere, the seaplane has more understructure which acts as a shock absorber for the fuselage and its occupants.

SPOKANE, WASH.—Ray Paulson of Seattle and Roy Shreck have just completed a series of aerial motion pictures for the Washington Water Power Company. They flew a Stinson.

Beco Sport Plane Is Undergoing CAA Tests

A new two-place Model L-5 Beco sport plane, which is undergoing CAA flight tests, has been announced by Beco, Inc., which is now in a new plant at 5844 Inskip Ave., Los Angeles. The plane incorporates Handley-Page slots, and flaps that extend from the inner side of the ailerons to the fuselage. Landing speed is thus reduced to an estimated speed of 30-mph. Top speed is estimated at 120-mph. and cruising speed is said to be 100-mph. High visibility for the pilot is claimed, with a view of the entire forward horizon in landing position.

Powered by a Lambert 90-hp. engine, the craft's cruising range is estimated at 500 miles with a 25-gal. gasoline tank. Estimated rate of climb per minute and service ceiling are 1,000-ft. and 18,000-ft. respectively. Other features are side-by-side seating, doors on both sides of the cabin, a steerable tail wheel, a 100-lb. baggage compartment. Construction is standard welded steel tubing with fabric covering. Finish is silver and crimson. Span is 38-ft., length is 24-ft., height is 7-ft. 4-in., empty weight is 1100-lbs., and gross weight is 1,700-lbs. Beco, Inc., is headed by Harvey Beilgard.

Burritt With N. A. A.

Tampa, Fla., Sept. 12—R. E. Burritt, formerly local traffic manager for National Airlines here, has been appointed full-time secretary of the newly-created Florida Department of the National Aeronautic Association, according to announcement by Wright Vermilya, NAA Governor for Florida and president of the West Palm Beach Aero Corp., West Palm Beach.

Indiana Tour Oct. 10-14

Indianapolis, Sept. 19—The 10th annual Indiana air tour will be held Oct. 10-14, visiting all principal cities, Clarence F. Cornish, president of the Indiana Aircraft Trades Association, said today.

YOU'LL LIKE THESE TAYLORCRAFT FEATURES

- Smoother Controls
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- Improved Visibility
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- Greater Stability
- Greater Construction
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First in Safety Record

NEW Taylorcraft 50*

The Ship You'll Choose by Comparison



● As in the familiar Taylorcraft 40 models which have established an unsurpassed record for performance and safety, again the new Taylorcraft 50 leads the field by comparison. You'll thrill with its streamline appearance, its quick climb, its stability, its landing ease. You'll marvel over its ease of control, snappy performance and operating economy. The new Taylorcraft 50 is truly the leader of the low-price field — the ship you'll choose by comparison. A demonstration will quickly prove it. Don't delay. See a Taylorcraft dealer, today.

- AVAILABLE WITH FOLLOWING MOTORS:
- Continental 40 or 50
- Franklin 50
- Lycoming 50

AS LOW AS **\$525 DOWN**
F. A. F. Alliance, Ohio
Balance on Easy Terms

See it! Fly it! Today!

★ **AMERICA'S SAFEST AND FINEST LOW-PRICE AIRPLANE.**

Write for complete descriptive literature.

TAYLOR-YOUNG AIRPLANE CO.
ALLIANCE, OHIO

Endurance Flyers Flew 5,830 Miles

New York, Sept. 21—The 50 hp. Franklin Aircooled engine used by Merrill Phoenix and Howard Allen in their Cub which recently broke the world's light plane endurance record by staying aloft 106 hrs. and 6 min., developed 2300 rpm. for several hours on the block immediately after the flight, according to officials of Aircooled Motors Corp.

The motor, which was designed and built by engineers and mechanics of the old Franklin Automobile Co., taken over with patents by the new company, has a 3 3/8 in. bore and stroke with four horizontally-opposed cylinders. It has a displacement of 150 cu. in., compression ratio of 6.6 to 1, and uses 70 octane gas.

During the flight, 5,830 miles were traveled over the State Fair at Syracuse, at an average speed of 55 mph., using 287 gallons of non-leaded gasoline. This is an average of 2.707 gallons an hour, or 20.3 miles to the gallon, with an oil consumption of five quarts, or .048 quarts an hour. A total of 60 refuelings was made.

Lansing Exhibition Held

Lansing, Mich., Sept. 11—An air carnival sponsored by the American Legion and the local NAA attracted about 10,000 persons today. Leonard Peterson stunted in a Dart monoplane; Dick Randolph, of Akron, O., and Charles Abel, of Chicago, demonstrated gliding; Harvey Hughes demonstrated takeoffs and landings with a trailing ad sign; George Van Auker and Herman Colbeck presented aerobatics; John Matthews demonstrated a tri-cycle landing gear equipped plane and Ted Sweet parachuted to earth.

PARKS Trained Operations Men



fulfilled entrance requirements and, during their 96 weeks of intensive training, maintained the required high standard of performance which distinguishes the Parks Air College training programme.

In common with every other Parks graduate they earned an average grade of no less than 82 per cent in every term's work.

Their training included:

- 260 hours in meteorology
- 127 hours in navigation
- 348 hours in radio
- 528 hours in air transportation
- 1159 hours in aviation mechanics
- 468 hours in executive subjects
- 20 hour orientation course in flight training.

Aviation Operations and Executive graduates are continuing the unique record of 100 per cent employment in the field of commercial air transport for which they prepared—convincing evidence of the practical value of their training.

Additional Operations Men, however, will be graduated each three months, the next class completing its work September 23rd.

Wire, phone or write your requirements to Oliver L. Parks, President,

**PARKS AIR
COLLEGE, Inc.**
EAST ST. LOUIS, ILLINOIS

COMMITTEE NAMED

San Antonio Air Group Headed by C. F. Dieter

San Antonio, Sept. 12—The Chamber of Commerce has announced its newly-formed aviation committee, consisting of the following men: C. F. Dieter, chairman, Craig Adams, W. O. Allen, J. W. Austin, J. M. Bennett, Jack Brosseau, Harry Brown, A. A. Buchanan, W. T. Chumney, C. W. Crowe, William Dean, H. A. Foltz, Gabriel French, Gordon Friedrich, F. O. Gillette, Fred Harman, G. W. Johnson, E. H. Kifer, C. B. Kilpatrick, J. H. Lapham, B. B. McGimsey, O. R. Mitchell, Clint Neal, W. H. Northway, L. D. Ormsby, R. D. Penny, Henry T. Phelps, Dan Quill, Lamar Seeligson, Gordon Shook, Jack Steede, Meritt Steger, John Steiner, George Vordenbaum and Joe Williams.

Projects on the committee's program include making Stinson Field an international port of entry, development of mail and passenger service between San Antonio and Amarillo, San Antonio and El Paso, San Antonio and Mexico City, and extension of the route between here and Houston to connect with Shreveport and Memphis.

60,000 Watch First Denver Aviation Show

Denver, Sept. 18—Denver's 1st annual free air show today drew about 60,000 persons to municipal airport, said to be the largest crowd ever to gather at the field. More than 40 planes, including eight of the 120th Observation squadron, flew in the opening parade. Participants and winners follow:

Wesley Davis (Waco) won the 15-mile pylon handicap race, Ray Melberg (Fairchild) was 2d, Fred Grey (Waco) was 3d, and Ambrose Sherred (Beechcraft) was 4th. Sherred (Beechcraft) also won the free-for-all race over 10 competitors, with an average speed of 185-miles around the triangular 15-mile course. O. T. Massey and Wendell Galbraith won 1st and 2d spot landing prizes. Stunters were Fred Grey (Waco), Sam Mason (Taylorcraft) and Melberg (Fairchild). Grey and Harry Cornish won the first two bombing contest prizes.

Continental Air Lines sent one of its Lockheed transports over a 155-mile course to Estes Park, Central City and return in a race against time. Official NAA result was 44-min. 18-sec., or 210-mph. average. A 35-mph. headwind slowed the outward trip but return average was 255-mph. Capt. O. R. Haueter was at the controls.

Fred Wahl, Claude Thompson and Sam Mason won the first three prizes in the lightplane race. Show manager was Capt. Ray Wilson. Walt Higley was starter and Warren Prosser handled the entries. Sponsors were the chamber of commerce and the NAA. John Stark is local NAA president.

New Pa. Guardsman Chief

Harrisburg, Pa.—Maj. J. Victor Dallin, Lansdowne, Pa., has been promoted to lieutenant colonel of Air Corps, Pennsylvania National Guard, and has been assigned to the staff of the 28th division as chief of the aviation section. Col. Dallin was an officer in the British Royal Air Force in the World War, afterward attended the School of Military Aeronautics at Oxford and the air school at Ryerson, Canada. In 1927 he enlisted in the 103d Observation Squadron. He was commissioned a 1st lieutenant the same year, and successively a captain and major in 1932. His record of 19 years' flying is free of accidents. He is an expert in aerial photography.

Plane Scatters Salt

Idaho Falls, Idaho—For the first time an airplane has been used for scattering rock salt for wild game in the almost inaccessible back country of the Challis National Forest. A. A. Bennett, of this city, made eleven flights carrying 1,000 pounds of salt in 20-pound bags on each trip. Flying as low as 500 feet, the bags are dropped on ridges, the bags breaking as they strike the ground. The area being covered by this method does not even have pack trails.

Group to Consider Founding Instructors' Assn. for Florida

Orlando, Fla., Sept. 15—This city's two-day celebration of the 10th anniversary of its municipal airport will include a conference of flying instructors Oct. 5 to discuss plans for formation of a professional instructor association for Florida. C. A. A. inspectors will be present, it was announced by H. C. Whitney, director of the aviation division of the State Road Department of Florida.

The Orlando Chamber of Commerce hopes to have 200 students take their first lessons in flying during the two day program of contests, meetings and entertainment Oct. 4-5. Sponsors are junior and senior chambers, Orlando Air-Pilot Association, with assistance of the State Aviation Division, F.A.A., and N.A.A.

Aeronca Sales Changes

Cincinnati, Sept. 20—Aeronautical Corporation of America announce the following additions to their sales and distributors' list: Jones & Humeston, Inc., Van Nuys, Calif., district managers for California, Nevada, Arizona; Ivan Hillyard and Robert Stilwell, of Evansville, Aviation, Evansville, Ind.; O. E. Dickerhoof, new district manager for Kansas and Oklahoma; Ray Vaughan, district manager for northern Ohio; A. Elliott Merrill and Gilbert Cook, of Washington Aircraft & Transport Corp., Seattle, district managers for Washington, Oregon, northern Idaho; John T. Corrodi, Columbus, O., district manager for central Ohio; Inter City Airlines, district manager for New England.

Trophy Contest Announced

Fort Wayne, Ind., Sept. 16—The Johnston Air Trophy contest for private and solo pilots will be held Oct. 15 and 22, the Aero Club has announced. Dr. D. D. Johnston is donor of the trophy and president of the club.

Announce Maine Winners

Presque Isle, Me., Sept. 18—Lee Fairweather, Arthur Shields, Leon Kinney and Richard Graves were the 1st, 2d, 3d, and 4th winners in points at an air show here today. Bud McKinney was in charge of the meet.

Hartford Dedication Nov. 12

Hartford, Conn., Sept. 20—The Aviation Commission has set Nov. 12-13 as the tentative dedication dates for the new Brainard Field administration building.

10 Ships Tour Wisconsin

Milwaukee, Sept. 20—Ten planes left here today for Janesville on the 2d leg of the tour of the Wisconsin NAA. Tour queen is Miss Martha Hayes, of Lake Delton.

Athens Show Oct. 22

Athens, Ga., Sept. 23—A two-day air show will be held at Epps Field, Oct. 22-23 to raise money to match a WPA appropriation to construct a hangar and improve the field. Joel Wier, secretary of the Chamber of Commerce, announces. Jack Stepe, director, will be assisted at the show by Harvey Hogan.

Aeronautical Charts

The U. S. Coast and Geodetic Survey, Department of Commerce, Washington, D. C., announces the following new charts which cancel all previous editions. Pilots are warned by the Survey against using obsolete charts.

Radio Direction Finding Chart
22-DF June, 1938. Scale, 1:2,000,000. 34 by 25 inches.

Designed for radio direction finding. Around each radio range station is a compass rose for plotting radio bearings. Located in latitude 38-49 degrees north and longitude 85-108 degrees west, an area of about 225,600 sq. mi., covering portions of Montana, Wyoming, Colorado, North Dakota, South Dakota, Nebraska, Kansas, Minnesota, Iowa, Missouri, Wisconsin, Illinois, Michigan, Indiana, and Canada, including Denver, Miles City, Pembina, Chicago, Indianapolis, and St. Louis. Lithographed in 12 colors, showing aeronautical features in black, names of topographic features in dark gray, contours in brown, drainage in blue, flight lines in purple, cities in yellow, and five gradient tints. Price 75c.

New Aeronautical Radio Direction Finding Chart
24-DF, July, 1938. Scale, 1:2,000,000. 34 by 22 inches.

Replaces edition of January, 1938, including addition of compass roses at Bakersfield and Sacramento, Cal., and at numerous marine radio beacons along California coast. This chart covers an area of some 650,000-sq. miles, located in latitude 31-41 degrees north and longitude 104-123 degrees west.

New Sectional Aeronautical Charts
(All sectional aeronautical charts are scaled at 1:500,000 and priced at 40c each, with a discount of one-third on orders, including assortments, grossing \$10 or more.)

AUSTIN, August, 1938. 20 by 47 inches.

Realignment of Waco radio range and the southwest course of the Big Spring radio range. Minor changes in other aeronautical data.

CHICAGO, August, 1938. 20 by 42 inches.

Radio ranges added at LaFayette, Ind., and Morse, Ill. Civil airways added. Other revisions include changes in airports, beacons, radio facilities, and topographic features.

DETROIT, July, 1938. 20 by 41 inches.

Changes include revision of aeronautical data with the realignment of Elmira radio range, complete information regarding time of operation of the marine radio beacons, and other changes in airports and radio facilities.

FARGO, August, 1938. Size 20 by 38 inches.

Addition of beacons from Fargo to Grand Forks and realignment of west course of Bismarck radio range.

NEW YORK, August, 1938. 20 by 46 inches.

Realignment of radio ranges at Elmira, N. Y., Allentown, Pa., and Newark; addition of radio ranges at New Hackensack, N. Y., and Hartford, Conn.; and various changes in airports and beacons.

OKLAHOMA CITY, August, 1938. 20 by 45 inches.

Includes realignment of south course of radio range at Oklahoma City, revision of weather broadcast at Amarillo, and minor changes in airports.

ROSWELL, August, 1938. 20 by 46 inches.

Shows realigned west course of the radio range at Big Spring, Tex., together with accumulation of airport changes.

ALBANY, July, 1938. 20 by 41 inches.

Addition of radio ranges at Utica and Rochester, N. Y.; realignment of radio range at Elmira, N. Y.; addition of one course of the radio range at Hartford, Conn. Other changes in airports and beacons.

CHARLOTTE, July, 1938. 20 by 45 inches.

Relocation of marker beacons at Anderson, S. C., and Winder, Ga., and addition of the new McGhee-Tyson Municipal Airport at Knoxville, as well as other airport and beacon changes.

CLEVELAND, July, 1938. 20 by 42 inches.

Shows low-powered radio range at Cleveland, besides various other changes in radio facilities, airports and beacons.

MIAMI, June, 1938. 26 by 38 inches.

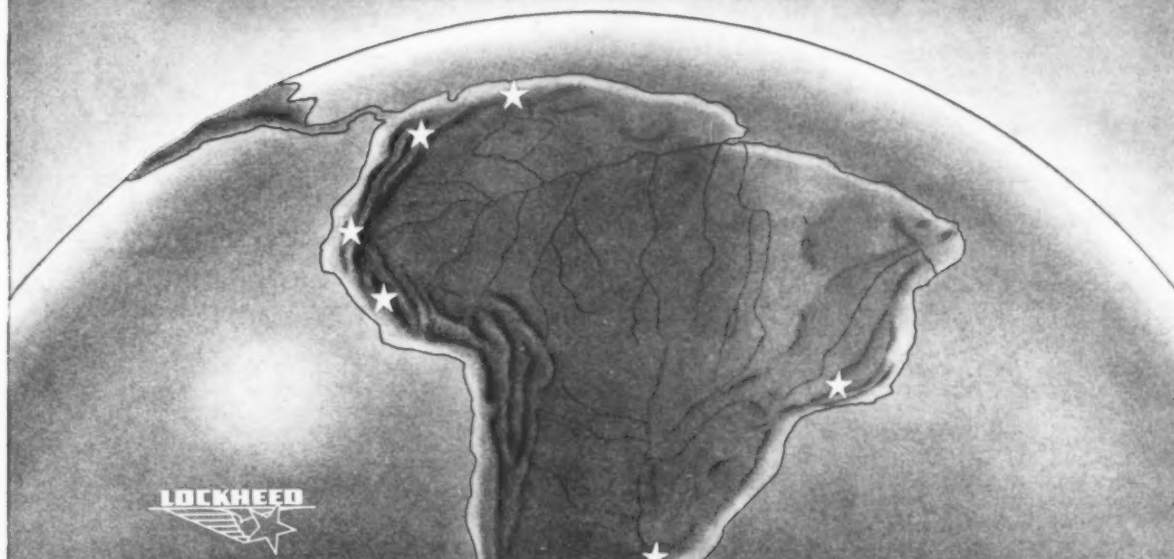
Complete revision of topographic features, from flight check made in January, 1938. Various changes in airports and beacons.

Records

Mrs. Helen Montgomery, Detroit, set a new American soaring endurance mark for women near Frankfort, Mich., Sept. 4, remaining aloft 7-hrs. 22-min.



SOUTH AMERICA... *Expansive realm of the* LOCKHEED EMPIRE



South America's vast regions of undeveloped territory are among the richest in the world. Efforts to reach these natural resources by modes of transportation other than airplane have been baffled by barriers of trackless jungles and unsurmountable mountains. Aviation is playing the important part in South America's development that waterways, wagon-trains and railroads played in the pioneering of other continents.

Lockheed airplanes, in the service of private owners, are making possible the development of remote mining, petroleum and other resources. Lockheed 10s and 12s are in the service of the Brazilian Army, the Argentine Army and Navy, Aeropostal, the government owned airlines of Venezuela and Panair do Brazil, subsidiary of Pan American Airways. Here as on every continent, personal sales service is available through direct factory representatives!

LOCKHEED AIRCRAFT CORPORATION, BURBANK, CALIFORNIA, U.S.A.

NORTH AMERICA—UNITED STATES: Courtlandt S. Gross, 614 Chrysler Bldg., New York; George Swayne, Asst.; Roscoe J. Behan, 2353 Field Bldg., Chicago; Don Marshall, Love Field, Dallas. **CANADA:** Fairchild Aircraft Limited, Longueuil, Quebec. • **SOUTH AMERICA—H. J. White,** Regional Sales Director, Diagonal Norte 567, Buenos Aires. **ARGENTINA, PARAGUAY, URUGUAY, CHILE:** Tri-American Aviation Corp., Buenos Aires. **VENEZUELA:** C. Adrianza & Co., Inc., Caracas. **BRAZIL:** Oscar Taves & Co., Rio de Janeiro. **ECUADOR:** Ribadeneira Saenz & Cia., Guayaquil. **COLOMBIA:** Lewis T. Wilkie, Bogota. **PERU:** Faucett Aviation Co., Lima. • **EUROPE, AFRICA, INDIA, ASIA MINOR—Norman Ebin,** Direct Factory Representative in charge of Europe, Africa, India and Asia Minor. Ferris M. Smith, Ae. E. Asst., Cable "Emteha," Warsaw, Poland. **HOLLAND, DUTCH EAST INDIES:** Lindeteves-Stokvis, Amsterdam. **DENMARK, NORWAY, SWEDEN, ICELAND:** Cai Caspersen, Copenhagen. **INDIA, BURMA, AFGHANISTAN:** Govan Bros., Limited, New Delhi, India. **TURKEY:** Fuat Baban, Ankara. **UNION OF SOUTH AFRICA, PORTUGUESE EAST AFRICA:** Barlow's Motor Co., Ltd., Durban, Natal, S. A. • **ASIA—CHINA:** James W. Fisher, c/o American Eastern Aviation, Hongkong. **JAPAN:** Okura & Co., New York City and Tokio. • **AUSTRALIA, NEW ZEALAND, PAPUA AND MANDATED TERRITORIES—Brown & Dureau, Limited,** Melbourne and Wellington. • **PHILIPPINE ISLANDS—L. M. Hausman & Co.,** Manila.

F. D. R. PRESENTS COLLIER TROPHY

Successful Work on XC35 Sub-Stratosphere Plane Brings Fourth Award Since 1924

President Roosevelt on Sept. 16 presented the Collier Trophy for 1937 to the Army Air Corps for designing, constructing and equipping the XC35 sub-stratosphere plane, "the first pressure cabin airplane to be flown successfully anywhere in the world." It was the fourth time since 1924 that the Army had received this high honor.

The National Aeronautic Association committee on awards was as follows: Major J. H. Doolittle, chairman; E. R. Stettinius, Jr., Leighton Rogers, Edward P. Warner, William B. Mayo, George W. Lewis, S. Paul Johnston, Henry B. Dupont and T. P. Wright.

Major Carl F. Greene, Captain Alfred H. Johnson, and Dr. John E. Younger were cited as Air Corps principals in the research and development work which resulted in the award. Major Greene initiated the project and was supervising officer, Capt. Johnson was test pilot and assisted in the engineering, while Dr. Younger handled the technical aspects. Lieut. Col. Oliver P. Echols, of the materiel division of the Air Corps at Wright Field, was the administrative officer under whose direction the research was carried on.

In 1924 the U. S. Army Air Service received the trophy for having accomplished the first aerial flight around the world; in 1926 Major Edward L. Hoffman was the winner for his work in developing the parachute now universally used, and in 1934 Major Albert F. Hegenberger received the award for his achievements in blind flying.

The cabin of the sub-stratosphere plane uses a series of blowers and dischargers and maintains a constant pressure equal to the normal atmosphere of 14.7 lbs. per sq. in. at sea level. This pressure has been successfully maintained for many hours at altitudes above 30,000 ft., when exterior pressure has been reduced to only 4.4 lbs.

The XC35 took off on its first passenger flight from Chicago at midnight on Feb. 3, 1938, bound for Bolling Field. Louis A. Johnson, Assistant Secretary of War, was a passenger and the flight was to go regardless of weather.

"Ten minutes after the take-off the big strato-liner ran into an electric storm so intense that it picked up a halo of sparks along the leading edge of the wing," stated the announcement of the award. "Climbing at a rate of 300 feet a minute, the monoplane soared up to 22,000 ft. and over the storm." A successful landing was made at Bolling, completing a flight "that would have been suicide for an ordinary airliner traveling at ordinary flying levels." Award was made from a field of 35 other aeronautical achievements which were being considered.

Tomlinson to Germany

New York, Sept. 21—Lieut. Comdr. D. W. (Tommy) Tomlinson, in charge of TWA's overweather experimental work for the last three years, has been invited to deliver a scientific paper on high altitude flying before the Lilienthal Gesellschaft, a professional engineering society, in Berlin. He will sail Sept. 28, accompanied by Mrs. Tomlinson.

Rename Dyer Airport

Los Angeles, Sept. 18—Dyer Airport has been renamed Southwest Airport, and is managed by Elmer Riley. Edward A. Dyer, former manager, is now engaged in the aircraft used parts business at 11156 South Main St.

Paramount Wonders Why the Secrecy About Its Financing Men with Wings

Hollywood, Cal., Sept. 15—Paramount Pictures press officials have been somewhat bewildered at the apparent attempt at secrecy in New York that the company has financed the Association of Men With Wings for the purpose of returning the original Wright Brothers plane to this country. Out here it is not only no secret that Paramount put up \$25,000 for promotion of the organization, but it is believed the failure to admit the alliance in the east has harmed the possible benefits that might come from the organization.

Although the idea for the organization sprouted in New York, the west coast Paramount office went for the project in a big way and plans were laid to have patrons at Paramount movie houses sign petitions asking the return of the Wright plane. Other movie companies were to join in the movement. Paramount was not trying to hide the fact that the promotion was part of the advance publicity for its new picture, "Men With Wings," on which it has spent much money and talent. At the same time the Paramount boys (at least those out here) were sincerely interested in trying to accomplish something of benefit to the nation and to aviation. Some of them have been flyers themselves.

Paramount's financial interest was discussed openly at the first meeting of the Association of Men With Wings, headed by Chuck Kerwood. Prominent aviation persons heading up the association were in full accord that although the stunt was part of a movie publicity campaign, it might do the job of getting the Wright plane back in the U. S. through the medium of petitions signed by thousands or hundreds of thousands of the general public. It is felt that the attempt to deny a connection between the association and Paramount may have harmed the chances of getting newspaper publicity since most newspapermen suspected the tie-up anyway. Most newspapers will go along on an open and above-board publicity campaign if there is sufficient public interest.

Al Williams, aviation director of Gulf Oil and staff writer for the Scripps-Howard newspapers, excoriated the movement in a newspaper column ap-

pearing Sept. 12. "It's nearly time for these patriotic yeastings around the country to quit making foolish, cheap gestures about their desire to bring the original Wright plane back to the United States," he said. "If the real purpose of these organizations were to retrieve that gallant little plane from the Kensington Museum in London, we would be willing to tolerate the soo-like bellowing that attends each one of these publicity plunges. But for every one that's on the level, the other thousand are reeking with efforts to sell something or somebody."

"None of the organizations which purport to retrieve the original Wright machine from the British Kensington Museum are in any kind of position to influence the Smithsonian Institution. No one else has been able to, including official governmental pressure during the past 30 odd years. Few of these organizations know what they are talking about when they launch patriotic programs for bringing the Wright machine back to this country. The absurd egotism of claiming they are trying to honor Orville Wright never occurs to them. These 'Men Without Wings' are the plague of the flying business."

Nine Fellowship Students

Given Transportation by PAA

New York, Sept. 13—Continuing a practice established last year, Pan American Airways has awarded travel fellowships to nine outstanding students from as many Central and South American countries who will attend universities in the United States. In 1937 eight students were given free transportation to this country (Miami, Los Angeles, or Brownsville) and back to their homes after the close of the school year. The students are selected by the Institute of National Education for tuition scholarships.

The young people will come from Argentina, Brazil, Chile, Costa Rica, Ecuador, Haiti, Honduras, Paraguay, Venezuela, and will attend American, Columbia, Indiana, Northwestern, California and Yale Universities, Rensselaer Polytechnic Institute, Cranbrook Academy and New Mexico State Teachers College.

A Trophy and Two Happy Warriors



It was no time for military discipline Sept. 16 when Maj. Carl F. Green (left) and Capt. Alfred H. Johnson, both of the Army Air Corps, Wright Field, posed with the Collier Trophy after it was presented by President Roosevelt. They seem happy about the whole thing. (Harris and Ewing Photo).

WEATHER BUREAU CHIEF DIES AT 58

Dr. Willis R. Gregg Responsible for Rapid Development of Aviation Upper-Air Observations

Dr. Willis Ray Gregg, 58, chief of the United States Weather Bureau, developer of the weather service along the federal airways, special adviser for several ocean flights, and aviation enthusiast, died in Chicago on Sept. 14 of heart disease. Dr. Gregg had been attending the air safety conference between Air Transport Association members and the Civil Aeronautics Authority.

A native of Phoenix, N. Y., Dr. Gregg was born on Jan. 4, 1880, and entered the service of the U. S. Weather Bureau in 1904, one year after graduating from Cornell University. After spending seven years at the U. S. observatory at Mt. Weather, Va., he came to Washington, and in 1917 was appointed head of the aerological division. Shortly after the advent of the New Deal, Secretary of Agriculture Wallace named him chief of the meteorological service. He became chief of the Weather Bureau in 1934, succeeding Dr. Charles F. Marvin, who retired after 50 years' service.

In 1919, Dr. Gregg served as special meteorological adviser for the flight of the U. S. Navy NC seaplanes and for the crossing of the British dirigible R-34 later the same year. In 1926, when development of weather service for the country's airways was authorized, Dr. Gregg was put in charge.

After taking charge of the Bureau in 1934, despite his many other duties, Dr. Gregg continued to be actively in touch with aviation weather developments. He sent planes carrying meteorographs aloft to gather weather data, and later utilized balloons to carry the instruments. Two months before his death, he succeeded in getting a new device, known as the radio-meteorograph, installed at a few stations throughout the country. It was his belief that the instrument, which is sent aloft by a balloon and which transmits weather information to the ground by radio, will vastly improve upper air readings available to aviators.

A member of the National Advisory Committee for Aeronautics, and chairman of its subcommittee on meteorological problems, Dr. Gregg also belonged to the International Meteorological Organization, the International Meteorological Committee, the Daniel Guggenheim Committee on Aeronautical Meteorology, the Interdepartmental Committee on the Coordination of Meteorological Service for Aeronautics, the American Association for the Advancement of Science, the Royal Meteorological Society, the National Aeronautical Society, the American Geophysical Union, the Washington Academy of Sciences, the Washington Philosophical Society, and was a fellow of the American Meteorological Society. He belonged to the Cosmos and the Federal Clubs of Washington.

Dr. Gregg was the author of two books, "Aeronautical Meteorology," and "Aerological Survey of the United States."

He is survived by his wife, Mrs. Mary Gregg, and one daughter, Ruth Marguerite Gregg. Funeral services were held in Washington, Sept. 19.

TCA Names Traffic Manager

George G. Wakeman has been appointed general traffic manager of Trans-Canada Air Lines with headquarters in Montreal. He was formerly civil air instructor with the department of transport of the Canadian government.

Aviation Radio Interests, F. C. C., Discuss Proposed Operators Rules

Abolition of 3rd Class Wireless Telephone License, Inclusion of Written Examination for Renewal Opposed; Final Draft Expected in Fall or Spring

Various aviation interests appeared before E. K. Jett, chief engineer of the Federal Communications Commission, in Washington on Sept. 14-15 to express their opinions regarding the Commission's proposed rules and regulations for professional radio operators. The rules, on which a previous hearing was held on July 11-12, will be drafted in final form after the FCC has considered all objections.

Much opposition was offered to the proposal made by the American Communications Association, a C. I. O. affiliate, that the third class radio telephone license be discontinued. The examination for this type of license, which is held by practically all airline pilots, deals particularly with the non-technical side of radio, such as laws and regulations, and the average owner-pilot or transport pilot can secure it without taking a radio engineering course. Because of the detailed study necessary for a second or first class license, abolition of the third class permit would necessitate the carriage of a radio operator by all transports.

In commenting on this union proposal, Paul Goldsborough, president of Aeronautical Radio, stated that it was opposed "in view of the fact that operation of the aircraft radio equipment on board aircraft has been highly developed and perfected for push-button operation by pilot personnel," and that "the introduction of radio operators on board would tend to restrict the quick exchange by radio of messages between pilot and ground."

Taking a different stand on the proposal, Frank Melville, representing Eastern Air Lines' radio operators, in a letter to AMERICAN AVIATION, said, "The pilots seem to be worried that the third class type of radio operator license might be abolished on the assumption that such action would automatically render a great many pilots incapable, under the law, of flying for transport companies. On the contrary, the abolishment of the third class type of license (which is no license at all) would relieve pilots of the responsibility of handling radio equipment. In our opinion, they already have enough to do without concerning themselves with maintaining radio communication. We believe that present-day air transport requires the services of trained radio personnel in the air as well as on the ground."

Melville further stated that he could cite numerous instances in which aircraft have been destroyed and lives lost because of inadequate knowledge of radio on the part of operators. He declined to give examples, however, stating that he was not authorized to do so.

No objection was raised to the Commission's proposal to extend the operator's license from two to five years, but aviation representatives felt that the proposed written examination for renewal was unreasonable. Under the present system, an operator who can show satisfactory service during the life of his license can obtain renewal without examination. The FCC explained, however, that the exam would be abridged and would cover only changes in the law that might be made from time to time.

Haven B. Page, general counsel for the Private Fliers Association, in addition to opposing the abolition of the third class license, also opposed the written examination for renewal, stating that an oral test given by an FCC

inspector at the time the operator submits his aircraft for annual inspection during the fifth year of his radio license, would be adequate. If the applicant is also the operator of an aircraft transmitter, the test should be given at the time and place of annual inspection of such radio station, Page contended. Radio rules and regulations for private fliers should be simplified as much as possible, he said, because "radio licenses are admittedly incidental."

Another proposed rule objected to by Melville stated: "All radio operators licensed by the Commission shall, at the time of an inspection in the marine or aviation service, point out all defects and imperfections in radio equipment that are known to them, and shall also make known to the inspectors at the earliest opportunity all accidents or occurrences which prevented the normal and efficient operation of the equipment." This would tend to place the radio operator in the light of an informer or spy against his employer, Melville stated.

At the close of the hearing, the FCC indicated that it hoped to issue the final rules in the late fall or early spring.

Hal Henning Becomes S. W. Stinson Rep.

Dallas, Sept. 19—Hal P. Henning, partner in the well known firm of Booth-Henning, Inc., fixed base operators at Love Field here, is severing active connection with the firm to become factory sales representative for the Southwest for Stinson Aircraft division of Aviation Manufacturing Corp. His headquarters will be at Love Field.

Meanwhile Booth-Henning, Inc., will change its name to Southwest Airmotive, Inc., Mr. Henning retains his ownership interest in the business. He left today for Hollywood on a 10-day trip.

Hints U. S. Lines Take Chances in Bad Weather

Edmonton, Alberta, Sept. 14—W. Leigh Brintnell, president of Mackenzie Air Service, indirectly criticized safety measures of U. S. airlines in an interview here tonight in comparing U. S. and Canadian operations. "They fly to schedule in the U. S., generally speaking, unless weather conditions make it absolutely impossible," he said. "That means there will be accidents in the long run. Here, an extremely careful policy is followed. If the weather conditions are bad, flights are postponed for reasons of safety. The result shows in the fine record of northern flying." He attributed the condition cited to competition of U. S. airlines. Flyers out of Edmonton have established a "better safety record" than that of any other comparable air traffic on the continent, he said.

Bennett Prize to Poland

Poland won the 26th Times Gordon Bennett balloon race which started at Liege, Belgium, Sept. 11. The winning L. O. P. P. entry was given credit for floating 990 miles to Trojan, Bulgaria. Second was Belgium's entry, which landed near the Bulgaria-Yugoslavia frontier, about 900 miles distant. The remaining contestants were Polish, Belgian and French.

PARKER TO BRUSSELS

Insurance Man Is Technical Adviser to U. S. Delegation

Among those comprising the American delegation to the Fourth International Conference on Private Air Law



Parker

which convened in Brussels, Belgium, on Sept. 19, is J. Brooks B. Parker, prominent aviation insurance man of Philadelphia. Mr. Parker has served the Federal government on numerous occasions as consultant and technical adviser and his many associations with the industry included his part in the formation of National Air Transport in 1925, predecessor company to TWA. He is president of Parker & Co., insurance firm.

The American delegation is headed by G. Grant Mason, Jr., member of the Civil Aeronautics Authority. Stephen Latchford, of the Department of State, and Denis Mulligan, former director of the Bureau of Air Commerce, are the other two delegates.

In addition to Mr. Parker the technical advisers now in Brussels are Laurel E. Anderson, legal adviser of the Maritime Commission at London; Capt. L. T. Chalker, chief aviation officer of the U. S. Coast Guard; and Arnold W. Knauth, admiralty lawyer. The secretary of the delegation is Edward T. Wailes, second secretary of the American Embassy at Brussels, and the technical assistants are John Jay Ide, technical assistant in Europe for the N.A.C.A., and Arthur Lebel, of the Department of State.

Altick Calls North Beach Unfit, Asserts American Plans Base

Sherman Altick, aviation editor for New York Sun, who has consistently opposed North Beach Airport as a suitable airline terminal for New York City, asserted in his column on Sept. 17 that North Beach has already cost \$30,000,000 and "may cost another \$20,000,000 before it is completed." He said the four major lines now using Newark are not at all pleased with the prospect of moving to North Beach, with the exception of American Airlines.

The article said Newark has 120 arrivals and departures a day, 100 of which are from the west and south. The additional mileage to North Beach amounts to 15 miles, which, at 65¢ a mile operating costs for DC-3's, means \$975 a day or \$355,875 a year, to say nothing of the added cost to the Post Office Department for payments on a mileage basis. He said the lines stand to lose because they cannot increase fares into New York and mentions the proximity of Newark Airport to railroad terminals in the event of weather cancellations.

American Airlines, Altick stated, is negotiating for three hangars at North Beach with the idea of establishing a large base there. Rental, he said, is to be 12¢ a square foot, a low figure which would in a measure make up for added operating costs into the field. American's schedules to and from Boston would be benefited by the change he added. He indicated that North Beach would be anything but satisfactory as a terminal.

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EASTERN Air Lines

All-American Aviation Corp. Only Bidder for Feeder Mail Routes

New Company, Headed by R. C. du Pont, to Use Adams' Pick-Up Device; Passenger Service Planned; P. O. May Advertise for Autogiro Service

All-American Aviation, Inc., recently formed at Wilmington, Del., with Richard C. du Pont as president, was the only bidder on Sept. 15 for the two experimental air mail routes advertised by the Post Office Department (AMERICAN AVIATION, Sept. 1). Bids were opened in the office of First Assistant Postmaster General W. W. Howes.

The highest bid, 43c per airplane mile, was submitted on the 413-mile route from Pittsburgh through West Virginia and a small part of Ohio, stopping at Morgantown, Fairmont, Clarksburg and 25 other towns. Frequency will be one round trip daily except Sundays and holidays between Pittsburgh and Clarksburg, one one-way trip between Clarksburg and Huntington via Parkersburg, and one one-way trip between Huntington and Clarksburg via Charleston.

On the Philadelphia-Pittsburgh route, the bid was 32c per mile. There are 26 stops, including the termini, on the 465-mile route, over which one round trip daily except Sundays and holidays is authorized.

Dr. L. S. Adams, vice president of All-American Aviation, and inventor of the pick-up and delivery device which will be used on the routes; Felix du Pont, Jr., and Richard C. du Pont, all have substantial financial interests in the company, which will be operated separately from Tri-State Aviation Corp. The latter company, under direction of Dr. Adams, is at present carrying express under contract throughout Penn-

sylvania, Maryland, Ohio and West Virginia, and plans to operate a passenger service over the new mail routes.

Both bids were surprisingly high, but it is expected that they will be ruled legal in view of the fact that the contractor will furnish the means of transporting the mail to the post office at each town. Dr. Adams stated that six new Stinsons, equipped with pick-up and delivery devices, will be used to operate the two routes.

In carrying passengers, Tri-State Aviation Corp. will stop only at the adequate airports. Reason for having separate corporations to handle the mail and passengers is that the carriage of passengers in planes using the pick-up and delivery device is not deemed advisable. The company plans to use Bellanca for the passenger traffic, but has not yet approached the Civil Aeronautics Authority for approval of routes and equipment.

Dr. Adams stated that All-American and Tri-State have test-flown most of the two routes, and that 75% of the ground stations are already installed. Tri-State has been providing express service to many of the towns included as stops on the feeder routes, holding contracts with three large Pittsburgh department stores, Montgomery & Ward in Baltimore, and Sears & Roebuck in Philadelphia.

Erie, Pa., and eventually Harrisburg, should be included as stops on the feeder lines, Dr. Adams believes, in order to expedite the placing of mail on the trunk-lines. The P. O. did not include these cities because of the increased mileage necessary.

The Post Office Department has \$100,000, provided in the second deficiency bill at the last session of Congress, with which to pay for experimental service during the remainder of the fiscal year, and is determined to use approximately \$30,000 of this for post office-to-airport autogiro flights. Payments on the new feeder routes, based on 85% performance for seven months of the fiscal year, assuming the lines are in operation by Dec. 1, would amount to approximately \$77,000. However, in order to hold the cost to \$70,000, the P. O. may ask the contractor to delay inauguration of service on one or both routes for a few months, or may cut down the frequency of service.

Advertisements for bids on post office-to-airport autogiro service may be issued before the first of the year. Chicago and Philadelphia are said to be the only two cities with post office roofs adequate for an autogiro landing, so that bids will probably be limited to one of these places. Payment for service is expected to be on a round-trip basis rather than by mileage.

Charles P. Graddick, superintendent of air mail service, is anxious to get the feeder routes in operation, primarily to test the merits of the pick-up and delivery device, about which the P. O. has some doubts. The advisability of having feeder stops at some of the unusually small towns on the routes will also be tested.

Cheyenne Airport Fire

Cheyenne, Wyo., Sept. 15—Fire caused \$1,700 damage here tonight when a road oil spreader used to condition a runway at municipal airport was badly damaged. Gasoline from the tank dropped on a red lantern and an explosion followed. Nearby structures and planes were not endangered.

'Back Stage' At The Races

Notes By A Stroller Record A Few Dramatic Incidents the Grandstand Throngs Cannot See

The scenes in the Big Show which the public never glimpses will leave a lasting impression with those who were more intimately connected with the 1938 National Air Races, construed by the Henderson Brothers themselves as their biggest triumph in a decade of race managing.

Motors roar, the crowd cranes its collective neck and the announcers dress up the spectacle with explanations for those who have shelled out good coin of the realm behind the stands.

But who can forget:

Art Chester's bitter disappointment over the failure of his mount in the Thompson race, aviation's biggest competitive money event?

The complete nervelessness of Roscoe Turner when he had brought down his silvered racer with \$22,000 in prize money waiting for him?

The calculated, cool and smart flying of Steve Wittman, who knew that he would be outdistanced and was content to jog around the course in the Thompson for lesser money than that offered for first place?

The sudden anger of Joe Jacobson when he discovered that the Folkert was bent on murder?

The stunned disbelief of Mrs. Russell Chambers as she was led into the hospital room where her husband lay, his head bandaged to heal hurts which, a few days later, proved to have been more serious than even his physician thought?

The excitement of those youngsters from the Delgado Trades School as they were preparing their "Flash" for the big time?

All too infrequently, the human beings who act in the Big Show are classed as human beings by those tens of thousands who sit in the stands. That the public took an unusual interest in the closed course events this year may have been due to the announcers' projecting the racers' personalities to the crowd.

The close competition helped, of course.

Apparently by accident, the Hendersons discovered a piece of showmanship to add to their repertoire. The wind was high at 4 p. m., the scheduled hour of the Greve event on Sunday, and to kill time the mounts of the competing pilots were paraded before the stands. Those in the press box wondered why the maneuver was not repeated on Monday, before the start of the Thompson. The crowd liked it.

Completely lost on the public was the significance of Turner's new record, at a speed some 19 miles in excess of the average hung up by Michel Detroyat at Los Angeles in 1936 over a shorter distance.

No government money went into the building of Turner's racer. No blessing from Washington dispatched him to the Big Show at Cleveland. No political hopes hung on his ability to outdistance the field. His mount was privately built, privately owned, as was that of Earl Ortman who also topped Detroyat's speed.

With nations pinning so much prestige on their planes' performances against stop watches and in competition, it was a tribute to America's private enterprise when two planes in the Thompson made such a magnificent showing.

The 1938 races were notable, too, for Miss Jacqueline Cochran's performance in the Bendix derby. Though her speed averaged nine miles an hour slower than Frank Fuller's in 1937, she wrestled Sacha Seversky's heavy mount through forbidding weather and found time to do a neat job in navigation all the way from Burbank to St. Louis.

And if, in her anxiety to hang up a new coast-to-coast record for women, she crossed the finish line at Bendix, N. J., on the second leg of her flight, too high for the official timer to be sure of her identity, she could be forgiven.

She deserved the applause she received when, after 2,450 miles of tempestuous flying, she had the courage to board a commercial transport, return to Cleveland and officiate at a party given in her honor.

Older heads in the aviation business wondered what the shouting was about when the German Storch performed during the three days of the meet. The ship's wing and slots were more than vaguely familiar. The memories of some of the spectators in the stands went back a good many years to the Curtiss Tanager.

One of the unsung heroes of the show was the man in the control tower at Cleveland airport. Only Ortman's close friends know about his radio-guided landing with a fast-freezing motor, his windshield spattered with oil.

Ortman radioed that he must have a clear field to come in as he crossed the line at the close of the Thompson. His oil pressure had been steadily ebbing for more than three laps. Then he contacted the control tower. He needed help, he said.

He wheeled around behind the stands and gingerly began letting down. Too

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'Flying Ambassador'



Frank W. Fuller, Jr., last year's Bendix winner, shown climbing aboard his Seversky Executive, which carries the emblem of the 1939 Golden Gate International Exposition. Fuller, who came in second in this year's Bendix race, has been named flying ambassador by the San Francisco Fair.

FINAL OFFICIAL STANDING OF CONTESTANTS—1938 NATIONAL AIR RACES

BENDIX TRANSCONTINENTAL SPEED DASH—SATURDAY, SEPTEMBER 3, 1938

Place	Pilot	Address	Entrant	Plane	Motor	Cu. In. Displ.	Elapsed Time	Speed	Money
1	J. Cochran	New York City	J. Cochran	Seversky	P & W Tw Wasp	1830	8:10:31.4	249.774	\$12,500.00*
2	F. Fuller Jr.	San Francisco	F. Fuller Jr.	Seversky	P & W Tw Row	1830	8:33:29.2	238.604	5,800.00**
3	F. Mantz	Hollywood	F. Mantz	Lockheed Orion	Wright Cyclone	1823	8:36:25.4	206.579	3,000.00
4	Constant	New York	J. Cochran	Beechcraft	P & W Wasp Jr.	985	10:14:39.6	199.330	2,000.00
5	Ross Hadley	Los Angeles	Ross Hadley	Beechcraft	P & W Wasp Jr.	985	11:13:46.4	181.842	1,000.00
6	Chas. LaJotte	Glendale	John Hinchey	Spartan	P & W Wasp Jr.	985	11:30:27.2	177.449	
7	Geo. Armistead	Los Angeles	Geo. Armistead	Gee Bee	P & W Hornet	1690		Dropped out	
8	Bob Perlick	Glendale	Bob Perlick	Beechcraft	Wright Cyclone	1823		Dropped out	
9	F. Cordova	Mineola, N. Y.	F. Cordova	Bellanca	Ranger 2 Menasco	1860		Dropped out	
10	Lee Gehlbach	Mineola, N. Y.	Jack Wright	Weddell-Williams	P & W Wasp Jr.	985		Dropped out	

NOTE: * Including \$1000 special prize for continuing to Bendix, N. J., and establishing the fastest time between Los Angeles and Bendix, N. J., in the 1938 Bendix Trophy Race. This further includes \$2500 special prize for the woman pilot making the fastest time between Los Angeles and the finishing point at Cleveland, Ohio.

** Including \$800 special prize for continuing to Bendix, N. J., and making the second fastest time between Los Angeles and Bendix, N. J., in the 1938 Bendix Trophy Race.

LOUIS W. GREVE TROPHY RACE—SUNDAY, SEPTEMBER 4

Place	Pilot	Address	Entrant	Plane	Motor	Cu. In. Displ.	Elapsed Time	Speed	Money
1	Tony LeVier	Montebello, Cal.	Wm. Schoenfeldt	Schoenfeldt Spec.	Menasco C6S4	544	47:49.89	250.88	\$12,000.00*
2	A. Chester	Los Angeles, Cal.	A. Chester	Chester Special	Menasco C6S4	544	47:55.22	250.416	5,000.00
3	J. Jacobson	Kansas City, Mo.	Union Airplane	Keith Rider	Menasco C6S4	544	54:57.03	218.278	2,000.00
4	E. Ortman**	San Diego, Cal.	H. W. Marcoux	Marcoux-Bromberg (Jack Rabbit)	Menasco B6S	544	56:06.18	192.503	1,000.00
5	H. Crosby	Los Angeles, Cal.	H. Crosby	Crosby CR4	Menasco C6S4	544		Out end of 14th lap	549.23
6	G. Dory	Los Angeles, Cal.	R. Bushey	Bushey-McGrew Spec.	Menasco C4S	363		Out after 12th lap	470.77

NOTE: * Including special award of \$2,000.00 for establishing a new record of 250.88 miles per hour in the Greve Trophy Race. The former record was 247.3 M.P.H.

** Flagged down at end of 18th lap. Credited with winning 4th place. \$680.00 paid to Racing Pilots Chapter of N.A.A. representing 40% of prize money for ships starting but not completing race.

THOMPSON TROPHY RACE—MONDAY, SEPTEMBER 5

Place	Pilot	Address	Entrant	Plane	Motor	Cu. In. Displ.	Elapsed Time	Speed	Money
1	R. Turner	Chicago	R. Turner	Turner-Laird (PESCO)	P & W Tw Wasp Sr.	1830	63:30.61	283.419	\$22,000.00*
2	E. Ortman	San Diego	H. W. Marcoux	Marcoux-Bromberg	P & W Tw Wasp Jr.	1535	66:44.18	269.718	9,000.00
3	S. J. Wittman	Oshkosh, Wis.	S. J. Wittman	Wittman Racer	Curtiss D-12	1145	69:26.87	259.187	4,500.00
4	Leigh Wade	Sp'g'ld, Mass.	Mil. Air. Co.	Military Aircraft	P & W Wasp Sr.	1830	72:02.74	249.842	2,500.00
5	Joe Mackey	Fostoria, O.	R. Turner	Weddell-Williams	P & W Hornet	1690	72:06.44	249.628	1,800.00
6	J. Jacobson**	Kansas City	Union Airpl. Co.	Keith-Rider	Menasco	544	27 laps	214.570	1,400.00
7	A. Chester	Los Angeles	A. Chester	Chester Special	Menasco	544	Completed 20 laps		600.00
8	H. Crosby	Los Angeles	H. Crosby	Crosby CR 4	Menasco	544	Completed 10 laps—disqualified		

NOTE: * Including \$4,000.00 special prize posted by the Ludlum Steel Company for establishing new speed record of 283.419 M.P.H. in this event. The former record was 264.261 M.P.H.

** Flagged down at end of 27th lap. Given credit for 6th Place. \$400.00 paid to Racing Pilots Chapter of N.A.A. representing 40% of prize money for ships starting but not completing race.

high, said the radioman across the field. Ortman pushed on the stick. Ease her, he was advised. He flattened his glide. His earphones told him he was over the edge of the field. He had cut his switches.

He came in, almost completely blind, sitting down in an apparently normal landing.

Unsung, too, was the laborious task of Walter C. Orr, the Hendersons' press contact man, in making arrangements for "coverage" of the show. His meticulously prepared "manual" was a Bible in the press box.

Executive Changes

Made At Lockheed

Burbank, Cal., Sept. 15—Lockheed Aircraft Corp. today announced that Charles A. Barker, Jr., has been appointed vice-president in charge of finance. Cyril Chappellet, secretary of the company, has been named assistant to the president, Robert E. Gross. S. W. Voorhes is assistant sales manager. R. A. Von Hake, formerly factory superintendent, is now works manager. J. H. Screenan is superintendent, with H. C. Christen as his assistant. Production planning is under Charles Miller.

Barker has been on the Lockheed board of directors for several years and will continue a member. He recently resigned as vice-president of the California Bank, a position he had held for 10 years. Von Hake has been with Lockheed since 1928 and successively has held the positions of chief draftsman, chief engineer and factory superintendent.

Reporter Makes Amends

Apologies to Mrs. Virginia Schaffert, "secretary to the secretary" of the Civil Aeronautics Authority. It seems that Mr. Frizzell's right-hand gal was quite pleased to see her name, together with those of the other members' secretaries, in AMERICAN AVIATION, Sept. 1, but raised a good-natured howl when the article failed to mention that she "had been with the boss for six years at the HOLC," although reference was made to the former services of three other secretaries. It was just an oversight, Mrs. Schaffert, not discrimination.

Loening Birthday Party

On his fiftieth birthday September 12, Grover Loening, aeronautical designer and consultant, gave a birthday party at his home in Oyster Bay, L. I. The fifty guests included many in the aviation industry.

Lockheed Carried Chamberlain

The historic and dramatic flight Sept. 15 of England's Prime Minister Neville Chamberlain to Germany for a conference with Adolf Hitler was made in a Lockheed 14, the manufacturers announce.

PARACHUTE SPOT JUMPING CONTEST

SATURDAY, SEPT 3

Jumper	Address	Distance from Mark	Money
1—Shirley Rauner	Hamilton, Ohio	73 ft.	112.50
2—Irwin Davis	Detroit, Mich.	90 ft.	62.50
3—Leonard Moore	Cincinnati, Ohio	113 ft.	37.50
4—Verne Stewart	Elgin, Ill.	166 ft.	25.00
5—Harry Langer	Pittsburgh, Pa.	295 ft.	12.50

MONDAY, SEPT. 5

1—Johnny Dunkle	Cleveland, Ohio	10-in.	112.50
2—Bill Rhode	Leonia, N. Y.	4-ft. 2-in.	62.50
3—Buddy Batzel	Bedford, Pa.	27-ft. 2-in.	37.50
4—Leonard Moore	Cincinnati, Ohio	103-ft. 8-in.	25.00
5—Earl Stein	Fostoria, Ohio	227-ft. 4-in.	12.50

NUMBER OF POINTS WON BY HIGHEST RANKING PILOTS

1—Col. Roscoe Turner	1000	4—Earl Ortman	635
2—Jacqueline Cochran	800	5—Frank Fuller Jr.	500
3—Tony LeVier	750		

Summary of Prize Money Paid Racing

Col. Roscoe Turner ..	\$23,800
(Joe Mackey)	
Jacqueline Cochran ..	14,500
(Max Constant)	
William Schoenfeldt ..	12,000
(Tony LeVier)	
H. W. Marcoux	10,000
(Earl Ortman)	
Frank Fuller, Jr.	5,800
Art Chester	5,600
S. J. Wittman	4,500
Union Airplane Co. ..	3,400
(J. Jacobson)	
Paul Mantz	3,000
Military Aircraft Co. ..	2,500
(L. Wade)	
Ross Hadley	1,000
Harry Crosby	549.23
Ralph Bushey	470.77
(G. Dory)	

	\$87,120
Racing Pilots Chapter of N.A.A.	1,080
	\$88,200

Parachute Jumpers

Johnny Dunkle	\$112.50
Shirley Rauner	112.50
Irwin Davis	62.50
Bill Rhode	62.50
Leonard Moore	62.50
Buddy Batzel	37.50
Verne Stewart	25.00
Earl Stein	12.50
Harry Langer	12.50

TOTAL PRIZE MONEY PAID:	\$88,700.00
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Upper left: Fred C. Crawford, president of Thompson Products, Inc., presents the Thompson and Ludlum Trophies to Roscoe Turner, winner for the second time of the Thompson speed classic, (283-mph., a new record).



Left: Lou Greve, president of the National Air Races, presents the Greve Trophy to Tony LeVier, whose 250-mph. speed won the Greve Trophy Race.



Circle: Major Jack Berry leaves his office as manager of Cleveland Airport.



Left: Jack Nelson (left) of U. S. Aviation Underwriters discourses with Grove Webster, newly-appointed private flying chief.

Below: Red-headed Carl Wootien, vice-president (sales) of Aeronautical Corp. of America, looking up.

Below right: Ronald Gill, public relations chief for Wright Aeronautical Corp., familiar figure at the races.



In Circle: Lew Palmer of the National Safety Council takes it sitting down.

Below: Gill Robb Wilson, state aviation director for New Jersey, explains the weird colors of his hat to Corrington Gill, assistant WPA Administrator.



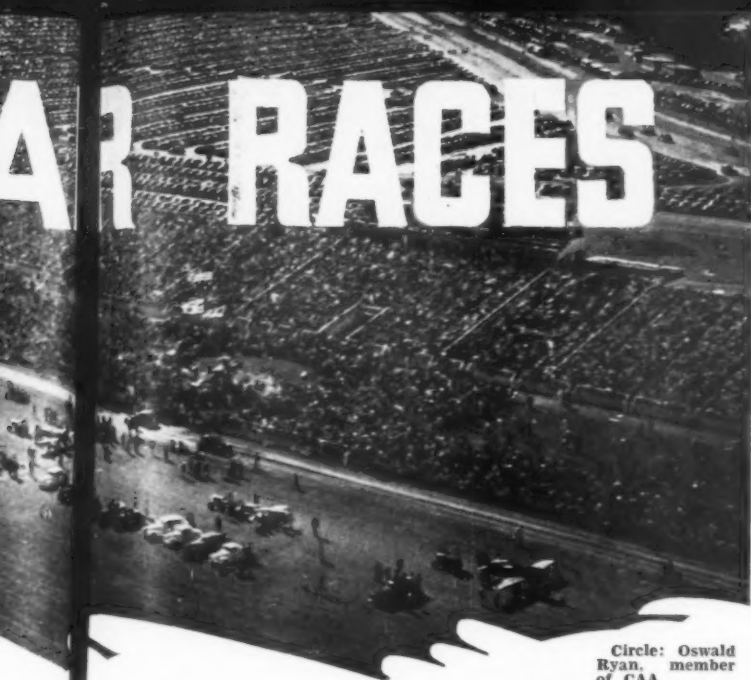
Circle at left: Dick Boutelle, whose smile and dark glasses are as ever-present at the races as the crowds. He's the CAA inspection chief.



Right: Lauren "Deac" Lyman, who has just graduated from NEW YORK TIMES to be assistant to the president of United Aircraft but he still won't wear a hat.



AIR RACES



Circle: Oswald Ryan, member of CAA.

Below: Grant Mason, CAA member and Col. W. Sumpter Smith, Air Safety Board.



Below: Jacqueline Cochran, Bendix winner with her trophy and Vincent Bendix (left) and Major Alexander P. de Seversky, maker of the ship she flew.

for Jack
his
manager
Air-

of U. S.
courses
why-ap-



Above: Handley Page, the famous British manufacturer, a prominent visitor.



Above: Haven Page, Washington attorney and counsel of Private Fliers Association.



Above: W. I. 'Bill' Van Dusen, public relations chief for Pan American Airways.



Above: Major Lester Gardner, secretary of the Institute of the Aeronautical Sciences.



In Circle: Bob Six, six-footer president of Continental Air Lines (youngest airline president in the U. S.)



Below: Abe Sushan (left), for whom Sushan Airport at New Orleans is named, talking with Herbert Sharlock, public relations director of Bendix Aviation Corp.



Upper left: Oliver Parks, Parks Air College, who never misses the races.

Left: Wayne Thomis, aviation editor of THE CHICAGO TRIBUNE and contributing aviation columnist.



At top: Roscoe Turner and the Laird Special he flew to win the Thompson Trophy Race.



Above: Tony LeVier and his Schoenfeld-Rider Special which won him the Greve Trophy Race.

CAA Restricts Free Airline Rides For Post Office Heads

The Civil Aeronautics Authority has laid down rules for free travel for employees of the Post Office Department which are expected to restrict considerably the non-revenue trips of those workers. Only duly accredited agents and officers of the department may be carried free and then only when such agents and officers who are traveling on official business relating to the transportation of mail by aircraft.

Those who shall be accredited are the postmaster general, the executive assistant to the postmaster general, the assistant postmaster general who at the time has jurisdiction over all of the air mail service, and his deputy assistant postmaster general; the director of the international postal service; the superintendent of the air mail service and his six assistant superintendents located at Washington, New York, Chicago, San Francisco, Atlanta and Fort Worth. Each of these officers must have accredited certificates.

Post Office inspectors may also travel free when definitely on air mail business but must sign forms requesting this transportation, list the points from and to which they are to be furnished transportation, and state the nature of their business. Inspectors must also exhibit proper credentials when applying for transportation.

Two Join U. C. Staff

Berkeley, Cal., Sept. 22—The University of California mechanical engineering department in the field of aeronautics has announced addition to its staff of Dr. Norton B. Moore, aerodynamics engineer for Douglas Aircraft Co., and Robert C. Uddenberg, of Boeing Aircraft Co., Seattle. Dr. Moore will be assistant professor in the college of engineering. He is author of *Airplane Performance*, and has written numerous articles in this country and Europe. He was formerly associated with the Northrop Corp. Uddenberg will be an instructor.

W. W. Conner Honored

Seattle, Sept. 13—Permission was granted yesterday by the board of county commissioners for the erection in Boeing Field administration building of a plaque honoring the late William Wallace Conner, former state legislator and aviation enthusiast. The N. A. A., of which Conner had been an officer, is planning the ceremony.

'Death of Maj. Gen. Oscar Westover Air Corps' Greatest Loss' - Woodring

Major General Oscar Westover, chief of the Army Air Corps, who, with his pilot, Sgt. Sam Hynes, was killed on Sept. 21 when his special Northrop two-seater low-winged attack plane crashed while nearing a landing at Union Air Terminal, Burbank, Cal., rose from the ranks to the head of the military aviation unit in a period of 34 years, and was one of the few men to hold all four Air Corps flying ratings: airplane pilot, airplane observer, airship pilot, and balloon observer. His death was described as the Air Corps' greatest loss in its history by his chief, Harry Woodring, Secretary of War.

Born in West Bay City, Mich., on July 23, 1883, he entered the Army on Sept. 4, 1901, after graduation from high school, serving as second and first class private, Co. K, 3d Battalion Engineers, at Fort Totten, N. Y., and at Washington Barracks. On June 15, 1902, he was appointed to the United States Military Academy, and upon graduation was commissioned second lieutenant of infantry.

Following this, his promotion record was as follows: first lieutenant, Apr. 13, 1911; captain, July 1, 1916; major, Signal Corps (temporary), Oct. 20, 1917; lieutenant colonel, Air Corps (temporary), Aug. 14, 1918; colonel, Air Corps (temporary), May 24, 1919. On June 30, 1920, he reverted to his permanent rank of major in the Signal Corps, being promoted to lieutenant colonel in the Regular Army on Jan. 30, 1930. On Jan. 13, 1932, he was appointed assistant to the chief of the Air Corps, becoming chief of that unit on Dec. 24, 1935.

In 1921-1922 he attended balloon school and airship school at Ross Field, Cal. In June of the latter year he won the national elimination free balloon race at Milwaukee, making one of the longest and fastest flights on record, 866 miles from Milwaukee to Lake St. John, Quebec, in 16½ hrs., and in August was the Army entrant in the international balloon races at Geneva, Switzerland.

Later in the year he served as director of Air Corps production in Washington, and in 1924 graduated from the one-year advanced flying course at Kelly Field. Also in that year he was executive officer at Langley Field, Va., finally becoming commanding officer and commandant of the Air Corps tactical school located there. After two years in this post, he entered the tactical school as a student, graduating in 1927.

Following this, promotions carried him to the position he held at the time of his death. He succeeded Maj. Gen. Benjamin D. Foulois, who retired from active service in August, 1935. Maj. Gen. Westover is survived by his widow, one son and a daughter. His son, Oscar Westover, Jr., recently finished the Army Air Corps School course at Kelly Field, Tex.

High government officials praised him and his service to the country:

President Roosevelt: "He was a gallant soldier, a true friend, one whose loss neither the nation nor his friends can afford."

Secretary of War Woodring: "The loss of Major General Westover is the greatest in the history of the Air Corps. His services and advice were always invaluable."

Assistant Secretary of War Louis A. Johnson: "Gen. Westover, a distinguished soldier and gentleman, was one of the world's outstanding authorities on both heavier and lighter-than-air aviation. The Army Air Corps made great strides under his leadership and inspiration. He will be greatly missed."

General Malin Craig, chief of staff: "The death of Gen. Westover is an irreplaceable loss to the Air Corps and to the Army as a whole. . . . He exemplified the highest type of Army officer in ability, in training, and in his remarkable talent for transcending others in the development of military airplanes."

Rear Admiral Arthur B. Cook, U. S. Navy: "The passing of Gen. Westover has deprived the Bureau of Aeronautics of a valued colleague whose wise counsel and sound advice in aviation matters will be greatly missed."

UAL Disposes of 44 Boeings in 2 Years

With the sale of two twin-engine Boeing 247-D transports to Wilmington-Catalina Airlines, United Air Lines has disposed of 44 of its large fleet of Boeings which went into service in 1934 and marked the advent of fast transcontinental transportation, according to W. A. Patterson, president.

The 44 Boeings have been purchased by other domestic airlines, notably Pennsylvania-Central and Inland Air Lines, and by aviation interests in China and South America. United will continue to operate its remaining Boeings on schedules where airports are not large enough to accommodate the 21-passenger Douglas DC-3 Mainliners. All coast-to-coast schedules are now flown with Mainliners.

The liquidating process has been going on for two years. Today the company's fleet consists of 36 Mainliners and 17 Boeings. The latter plane was the first 3-mile-a-minute all-metal transport to go into operation four years ago and established a world operating record.

Alabama Port Program

Montgomery, Ala., Sept. 13—An aggressive campaign to improve state flying facilities will be furthered with start today of a three-weeks tour of 12 Alabama cities by state and federal representatives. "The towns need either to purchase their present airfield, purchase additional property for enlargement, or provide for added improvements," said Asa Rountree, Jr., of the State aviation commission. A schedule of conferences with city and civic officials has been arranged at each stop.

BOEING 314 TOPS WEIGHT RECORDS

Undergoes First Maximum Load Test
With Gross Weight of
82,500 Lbs.

Seattle, Sept. 12—Breaking the American weight record three times in two days and the world's record for transports, the Boeing 314 Clipper during the past weekend underwent her most intensive flight tests in preparation for Civil Aeronautics Authority trials.

On Saturday, the Clipper first broke the record by carrying aloft enough water ballast and bags of lead shot to bring her gross weight to 77,500 lbs. Later in the day she lifted 79,000 lbs., and yesterday underwent her first maximum load test, at a gross weight of 82,500 lbs. The latter flight established a new unofficial world's record for a transport built for regular passenger service. It has been exceeded only by the German Dornier "DO-X" and the Russian "Maxim Gorky," neither of which was ever placed in regular transport service.

"The Clipper's empty weight was 47,500 lbs. and her load in water ballast, lead shot, fuel and crew was 35,000 lbs.," stated the Boeing Company. "In comparative terms, she carried her own weight plus the weight of 2½ fully-loaded Boeing 247-D transports."

Despite her heavy weight, no manual impulse, except adjustment of engine controls, was necessary to lift the Clipper from the water. Pilot Edmund T. Allen set the ship on her course, switched on the automatic pilot and the plane took off.

Besides Pilot Allen, the crew was composed of Earl Ferguson, co-pilot; Frank J. Weigand, Wright Aeronautical Corp., Ralph Cram and Harry West. Engineers Wellwood E. Beall, Ed. Duff, Nate Price and Berger Anderson later joined the crew as flight observers. William Taylor, representing Pan American Airways, also went aloft.



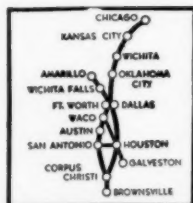
Breakfast in New York Luncheon in Bermuda

Back and forth, with clock-like regularity, fly the giant flying boats of Imperial and Pan American Airways. Four round trips to Bermuda every week...five hour schedules...ocean flying reduced to routine service!

To aid in the accurate navigation so necessary for operation of this exacting schedule, each of these great air lines has equipped its transports with a Sperry Gyropilot, Gyro-Horizon and Directional Gyro.

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Down the California coast speed three of the latest SB2U-1's, powerful additions to the Navy's flying fleet. Every inch a Vought, these new scout bombers have a background of Chance Vought's twenty-year experience in building airplanes for the United States Navy.

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AMERICAN AVIATION

The Independent Voice of American Aeronautics

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FORTNIGHTLY REVIEW

(Continued from page 1)

Navy and Marine Corps. A good start has been made, but much remains to be done and the aircraft industry must be given the governmental assistance it requires to maintain it in a position to go into war-time production with a minimum loss of time.

Of course, foreign purchases of American aircraft, already contracted for, will assist the maintenance of production schedules for several companies, but Washington should take the lead in assuring continuing orders as against the tragic day when once again we find ourselves on a war-time basis.

There should be no delay. "In time of peace," etc. is an old saw, but it still makes sense.

Reflections on the CAA

A FEW casual reflections on the Civil Aeronautics Authority are in order. During the month and a half of operations, just what has happened to the basic structure of the regulatory body which absorbed the old Bureau of Air Commerce?

First reflection is on the morale of the personnel of the old bureau. Stymied by indecision, politics by the higher-ups, lack of disciplined organization, and handicapped by internal bickerings, the old Bureau personnel has secured a new lease on life under the CAA. We make this observation purely from conversations with division and section chiefs. For once they know their boss, and whom to go to for decisions. The divisions are functioning more smoothly than ever before. Projects which used to require months for action (and in some cases a year or more) are now being approved in as short a time as an hour. Smiles have replaced the worried looks. Naturally the organization is still in its formative state, but the progress has been unexpectedly excellent.

Second reflection is on press relations. Under the old Department of Commerce regime information was difficult to obtain. A query to the director of the Bureau of Air Commerce was often referred to the Assistant Secretary of Commerce, and seeing the latter gentleman was a matter of days and cooling of heels in the ante room to await his pleasure. Today it is easy to find out what is going on—at least on those news subjects about which decisions have been made. There is no attempt at secrecy. Subordinates are not afraid to open their mouths on matters of simple fact. It is the nearest to an "open door" policy we have ever seen in any government agency. Compared with the old set-up, it is indeed a new era.

Third reflection is the progress made to date by the Authority despite all of the handicaps of launching a new agency. Only recently we heard an airline attorney express the opinion that he thought the CAA could have moved faster on airline matters than it has. But this Attorney lives 900 miles away from the nation's capital, he has almost no knowledge of government, and never had occasion to observe the old Bureau. The CAA has been besieged by politicians seeking to place favorites in jobs. These applicants number high in the hundreds. It is a rare day when a CAA member does not receive a half dozen calls from Senators—and more than one Senator has come back to Washington for the specific purpose of finding jobs for his friends. Those not so well acquainted with government agencies fail to appreciate the pressure placed on agencies such as the CAA. Senators and Congressmen cannot be rebuked, for their votes are needed for budgets and other requests on which the future of

the CAA (and aviation) depend. It is not easy to turn down the requests of friends for jobs. Yet the CAA has stood its ground in a truly phenomenal manner and to date politics has not gained a single foothold. The task of establishing a new agency is one that would stump the ordinary individual. Even such matters as the purchasing of pencils requires new procedures, new forms, new requisitions. Those who are thinking only of airline problems forget that the CAA has other pressing matters on hand—airports, private flying, regulations, next year's budget needs, airway aids, international agreements, and a host of other problems to say nothing of keeping the routine work going full blast during a transition period.

We commend the CAA for its advance to date because we have seen other agencies bog in a mire over similar problems. Considering everything, the CAA has gotten off to an admirable start and the progress has been faster than we had hoped in our most optimistic moments.

Two Tragic Losses

AVIATION suffered the loss of two very valuable men during September. Pages could be written about each.

The untimely death of Dr. Willis Gregg has saddened all who knew the Chief of the U. S. Weather Bureau and who realized the outstanding contribution he had made to aviation's development. He was not only intensely interested in weather reporting facilities, but demonstrated this interest time and time again before Congressional committees. He was such a fine salesman for aviation that he was rarely turned down in his constantly increasing requests for funds for additional facilities. He pioneered innumerable developments in weather reporting. He will be difficult to replace. Although not in the dramatic phase of aviation's news, he was one of the truly great men who aided its progress.

The tragic death of Major General Oscar Westover was a national calamity. He was a symbol of the American tradition that hard work brings promotion. Starting far down in the ranks many years ago, his steady climb to top position in the Air Corps was a living inspiration to men under him. He carried out his duties with earnestness and conviction and it cannot be overlooked that his willingness to speak at aviation gatherings in every part of the country was a genuine service of salesmanship for airports, for commercial and military aviation. The fine public statements made by his associates and superiors testify to their regard for this stocky little general who grew up in the ranks.

Why Can't We Do It?

ONE of the most amazing flight demonstrations of recent years was of the German Storch plane at the Cleveland races in which this apparently fool-proof ship was put through the most incredible maneuvers.

In take-off, climb, maneuverability, slow flight, and almost vertical landing, the Storch demonstrated that German designers and engineers have produced an airplane ideal for many purposes. And not the least of these is a utility ship for local or feeder airline service, where the size of the field makes it unsafe for the landing of the larger airliners.

Those who saw the exhibition at the races, and at several other fields, expressed the thought that it was a challenge to the American aircraft industry, for its load factor is better than the autogiro, it performs better in the wind, and is more nearly a foolproof airplane than the 'giro.

Several years ago the Navy experimented with a ship much of the same type as the Storch, and today that ship is back in a hangar, gathering dust. Why? How is it we have no data on this experimental craft? Why did the Navy stop its experiments?

American industry has done remarkable things with speed and reliability, but it has neglected the slow landing and maneuvering model, save in the smallest type of manufactured planes. The Germans have shown us what can be done with greater lateral control in medium-sized craft. What are we going to do about it?

Alaskan Villagers Collect \$2,115 for Airport

Fairbanks, Alaska—The folks up here who have been trying for years to impress Washington with the importance of aviation in the daily life of the Alaskan resident hope the story of the citizens of Ophir and their airport is broadcast in the states. Perhaps more of the public money can be obtained for desperately needed field improvements, they hope.

When it was announced that the Alaska Road Commission would appropriate a sum equal to an amount raised by any community for aviation aid, residents in Ophir and the surrounding area lost no time in rallying to the cause. Two business houses contributed \$500 apiece at once. The Ophir Roadhouse handed out \$200, and it wasn't any time at all before a total of \$2,115 was collected. Mrs. Blenheim, wanting to do her part, contributed five cases of gasoline for the motor trucks which would be working on the job.

Now, Ophir will have one of the territory's finest airports—because Alaskans can do wonders with an airport on \$4,230.

Pro, Con and Otherwise

Private Flying Grants

Central Jersey Airport
Box 247, Hightstown, N. J.
Sept. 5, 1938

To the Editor:

I have just read the editorial "Grants for Private Flying" in your issue of Sept. 1, 1938. The idea of subsidizing civilian flying clubs is good, but here is a plan for subsidizing civilian flying which I think is better.

Pay anyone who gets a student permit \$50 when he solos and \$50 when he gets 10 hours solo. Pay non-commercial pilots \$100 toward 20 hours of flying after it is flown. If it works out o.k., then make it an annual affair; \$100 yearly to non-commercial pilots for 20 hours of flying.

This form of subsidy would create flying clubs and new airports by the hundreds. It would solve the CAA's problem of how to get many new airports built in a hurry. Read the enclosed "Bennett Plan" which we have been using since 1935. In the Bennett Plan the prospective airport operator or flying club organizer solicits funds from prospective student flyers in the form of payments in advance for flying instruction. He uses the money for a down payment on one of the modern lightplanes, starts operating in any open field, its adequacy as an airport having been determined by the state aviation commission, and there we have a new airport or at least a start toward one.

The old Bennett Plan has been very successful. In this vicinity there are about 20 new airports, operators or flying clubs which found their origin in the Bennett Plan, while throughout the country there are probably hundreds of others judging from enthusiastic comments of people to whom we mailed the plan in response to their requests.

There are dozens of airports now in the process of formation by young fellows who are putting the Bennett Plan into effect. They are overcoming their obstacles one by one but a small subsidy would put them in business overnight.

Here's how the new plan would work. As an actual instance, Larry Holmes wants to get into aviation. He is learning to fly, but will hire an instructor to run his airplane until he gets his own instructor's rating. Larry thought a good place to start an airport would be his home town, Millville, New Jersey. He called on the mayor, who said they always did want an airport in Millville. The mayor brought the matter before the city council which was unanimous in favoring an airport for Millville. One of the members, a public-minded citizen, offered to donate land to the city for the airport. At this writing, Larry is rounding up all the prospective flyers he can find to raise the down payment for a new airplane. It is just a matter of time before we'll see a new airport at Millville.

Now, if 10 student pilots (and he could easily get 20 or 30) should turn over to Larry coupons issued with their student licenses each worth \$50, redeemable one upon soloing and one upon completing 10 hours solo, Larry could take the coupons to the bank or to a financial backer or to one of the numerous airplane finance companies, get immediate delivery of a new airplane, and start operations.

Any group of prospective pilots could pool their coupons to buy a plane, hire an instructor and start a

brand new flying unit. Hundreds of these groups would spring into existence spontaneously because people are already trying to organize, lacking only the money to complete their plans.

\$2,000,000 was recently granted for autogiro experimentation. A similar amount would produce nearly 100,000 pilots. Being of a "pump priming" nature, this sum would undoubtedly be doubled or tripled by the flyers, thereby making available 20 or 30 million dollars, most of which would be used for airport development and the production of new planes.

I should like very much to have your reactions to the idea.

Alfred B. Bennett
Bennett Air Service.

Misplaced Honors

New York City
September 12, 1938.

To the Editor:

I noticed in the September 1 issue your item with the heading, "Two Airlines Burn Up Over Same Ad Copy."

I happened to come across a copy of *Automobile Trade Journal* for June, 1937, in which Air Express advertises "Good Night, Atlantic . . . Good Morning, Pacific."

I note the American Airlines claim its ad had been prepared three weeks previous to date of publication by Ruthrauff & Ryan, which would make it early August or late July 1938.

United Air Lines claim they used the slogan a year ago last July.

If Air Express used practically the same thought in June 1937, undoubtedly the ad was prepared in May or April and it looks as though the honors should go to Air Express.

What do you think?
L. Craven Craig.

Obituary

CAPT. COLIN A. MACKENZIE, 40, credited with shooting down 17 German planes during the World War, died of a heart attack in Los Angeles General Hospital on Sept. 19. Capt. Mackenzie was attached to the Royal Flying Corps.

FRANK C. MCCARROLL, 75, pioneer aviation enthusiast and said to have owned the first plane in Dallas, died in that city Sept. 2. Surviving are three sisters and three brothers.

IRLIE U. PATTERSON, 43, theater electrician and original owner of the Commercial Airport, Tulsa, Okla., was killed on Sept. 3 when the Monocoupe in which he was flying stalled and crashed near Tulsa. Patterson, who was a World War veteran, had been flying seven years without an accident.

CLIFTON REEVES, 62, engineer and inventor, who once served as director of industrial relations for the Curtiss Aeroplane & Motor Co., died at his home in Trenton, N. J., on Sept. 20. Mr. Reeves was organizer and president of Reeves Engine Co., organizer of Reeves Foundry Co., the Lea Degen Pump Co., and the Reeves-Cubberly Engine Co. For five years he served as vice-president and industrial engineer of the Willys-Overland Co. He is survived by his widow and a son.

Unsolicited Comments

"I think you have a swell magazine and one that I read all through every issue." T. J. Gould, National Safety Council.

"Although my business is tobacco, I am keenly interested in commercial aviation—using the airlines at all available opportunities. In my search for a magazine with as much as possible concerning civil aviation, I have found none worth half as much as yours; and I am aware of the many excellent aeroplane magazines!" David M. Stewart, Montreal.

111,353 Go Through Ship

A new record for visitors passing through a single airliner on exhibit was announced by American Airlines, which played host to 111,353 persons at the Michigan State Fair in one week last month. The previous record was set a few weeks ago in Chicago, where 98,000 saw the same Douglas DC-3. Pennsylvania-Central showed one of its Boeings at Niagara Falls for one day recently, and United Air Lines displayed Mainliners at San Jose, Cal., and Denver.

Aeronautical Book Shelf—

THROUGH THE OVERCAST, *The Art of Instrument Flying*, by Assen Jordanoff. 348 pages. \$3.00. Funk & Wagnalls Co., New York.

Jordanoff, who in his previous book, *Your Wings*, described and explained the art of flying to the general public in as simple a form as possible, does the same thing with instrument flying in this new volume. A complete and practical treatise on the subject, the book will prove of interest to professional flyers, amateurs, ground crews and others directly connected with aviation, as well as to the lay public.

Included in the 27 chapters are discussions of weather maps, weather and airline flying, weather instruments, airplane instruments, dead reckoning, radio, airway radio flying and orientation, and celestial navigation. Many illustrations and diagrams, including numerous pen-and-ink drawings, help to simplify the author's explanations.

A character known as "Cloudy Joe," eager to learn, but a blunderer who "does not know he does not know," appears throughout the book, and serves to illustrate what not to do. "When it comes to flying," Jordanoff states, "particularly through the overcast, there is only one safe category to belong to, and that is the group who 'know how much they ought to know.'"

The fact that instrument flying has contributed inestimably to aviation in that pilots are no longer "slaves of the weather," is one of the author's main contentions. "The immense changes that have taken place in the past few years make it all the easier to visualize the possibilities which the air ocean offers mankind of tomorrow," he concludes.

GETTING A JOB IN AVIATION, by Carl Norcross. 366 pages. \$2.50. McGraw-Hill Book Co., New York City.

This book should prove valuable to persons attempting to secure jobs in any phase of the aviation industry. There are chapters on the airline pilot, the airline mechanic, operations, communications and meteorology departments, business jobs in the airlines, hostesses and stewards, jobs in private and non-scheduled commercial flying, federal government jobs and engineering and manufacturing positions. What these various workers do, the pay they receive, their working conditions, opportunities and requirements are discussed.

The author, who is a member of the New York State Education Department and a technical member of the Institute of the Aeronautical Sciences, has tried to keep the glamour of aviation out of his book and to present only facts. He has visited components of the industry in all parts of the country, questioned mechanics, pilots, meteorologists, laborers, foremen, employment

directors and general managers. From the information he has compiled, he attempts to tell the job-seeker what positions are available, how to go about getting them, training required, etc.

In a concluding chapter on the future of aviation, he draws attention to the following facts: the industry is small but is growing steadily and rapidly; the number of new jobs in any one particular branch of aviation is apt to be limited; qualifications are high; the supply of thoroughly trained men is inadequate, and there is already an oversupply of poorly trained and untrained applicants; splendid opportunity is offered to a limited number of young men of outstanding ability who are able to secure adequate training, and by 1943 there will probably be between 100,000 and 120,000 persons engaged in aviation in the U. S. or on American airlines in foreign countries.

There are two appendices, one listing the qualifications for pilots, mechanics, parachute riggers, traffic control operators, dispatchers, and other government ratings as contained in the Civil Air Regulations, and the other listing the Federal Communications Commission's qualifications for radio operator licenses.

WINGS IN THE NIGHT, by Willis Fitch, with a foreword by Fiorello H. LaGuardia. 302 pages. \$2.00. Marshall Jones Co., Boston.

Fitch, an American attached to the Royal Italian Flying Corps during the World War, writes of a little-discussed subject—night bombing flights, in a book that reads more like fiction than actual happenings. He attempts to give the reader a vivid picture of his experiences, including his first night solo flight at school in Foggia, Italy, when he found himself flying upside down without knowing it. Night flights over the Alps, the Piave River, and the Adriatic Sea are also described.

Captain Fiorello LaGuardia, now mayor of New York City, who was then "Congressman from New York," was Fitch's commanding officer. After having been on numerous bombing raids over enemy positions, LaGuardia, when asked how he was making out, came forth with the classic statement that "I can't take the buzzard off, and I can't land him, but I can fly the son of a gun!"

Many of the men, including Fitch, had left school to enter the War, and their moral reactions, religious sentiment and patriotism is discussed in a clear, straightforward manner.

Recently Published

AIRPLANE SERVICING MANUAL. By Lt. Col. Victor W. Page, Air Corps Reserve, U. S. A. Inspection, repair, maintenance, trouble shooting, rigging, mechanical processes. 987 pages, 487 illustrations. \$6.00. Published by Norman W. Henley Publishing Co., 2 West 45th Street, New York City.

Contractor Transfers 69 Employees to S. A. By Pan Am. Airliners

San Francisco, Sept. 20—Sixty-nine persons were transported as part of a single international travel order cinched recently by Pan American Airways' district traffic office staff here. All were cleared through Miami and Brownsville on round trip tickets to the Canal Zone and Barranquilla. Spokesmen here believe this sets up an all time record for a single transportation transaction.

All passengers were employees of Engineers, Ltd., which had been awarded a contract for welding and laying about 250 miles of oil pipeline from the Gulf of Darien, in the Caribbean, across Colombia to the mountain range dividing Colombia and Venezuela. To get important working forces into the field quickly, Alfred B. Swinerton, of the construction company, called on John Schroeter and his San Francisco district traffic office staff.

The first phase of the movement was completed with transfer of 34 persons out of Miami for Barranquilla. From Brownsville 35 passengers were transported to Barranquilla and the Canal Zone.

Swinerton said air transportation was utilized because he believed high salaried specialists could not afford to take the time to get to Colombo by boat, even at special boat rates.

Actual booking was handled by James Duffy. Ed Young and Jack Donia handled most of the work arranging reservations, and Porter Norris of the Houston district traffic office aided.

Pan American Names 2 For Caribbean Posts

Baltimore, Sept. 15—Pan American Airways has announced appointment of Sylvester J. Roll as commercial representative in the Caribbean area of its eastern division, a newly created position, and selection of Capt. Walter E. Allen as company manager in Jamaica.

Roll is well known throughout the system and in Colombia, where for almost 5 years he has been special traffic representative for SCADTA airlines. Following two weeks of conferences at Miami, he flew to his headquarters at Caracas. A graduate of Georgetown University, he has served in the U. S. legation in Sweden, and was also stationed in Mexico and Paris. In the latter city he was manager of Industrial Acceptance Corp. He served two years in Colombia as trade commissioner.

Capt. Allen, a pilot and aeronautical engineer of 21 years' experience, served with the U. S. Army Air Corps and Britain's Royal Air Force during the war, attended Massachusetts Institute of Technology after the armistice, was manager of Curtiss-Wright Flying Service at Toledo and Columbus, was engineer test pilot at the U. S. Naval Aircraft factory, and joined Pan American January 15, 1935.

Barrows Named Captain

Oakland, Cal., Sept. 23—W. J. "Joe" Barrows, veteran Alaskan flyer and Pan American Airways' pilot, was recently promoted to captain on the company's trans-Pacific division. Barrows has flown border patrol for the government, has been a forest fire flyer and headed a large commercial flying service. He flew in Alaska for nine years and has served as chief pilot of Pan Am's Alaskan division. Recently graduating with honors from the company's ocean flying school at Miami, Barrows' first assignment was piloting the Philippine Clipper from Honolulu.

AIRLINE TRAFFIC

40 Stewardesses Drop Out, American Reopens School

Chicago, Sept. 20—Students are at present being selected for American Airlines' fourth stewardess training school of the year, the applicants being interviewed by Victor Vernon, personnel director. A total of 29 stewardesses was graduated from the three previous schools, but the new unscheduled school was necessitated by the fact that 40 girls left the company, most of whom resigned to be married. The school is under the direction of Miss Hazel Brooks, senior stewardess; N. K. Wilson, supervisor of passenger service, and W. W. Kessler, assistant supervisor of passenger service in charge of stewardesses.

No Hay Fever at 6,000 Ft.

Chicago, Sept. 18—Hay fever sufferers can be assured of a good night's sleep on a sleeper plane, according to O. C. Durham, chief botanist and pollen expert for Abbott Laboratories, who recently flew over part of United Air Lines' system, studying pollen in the air. At 6,000 ft. above the ground, there were no traces of pollen whatsoever, and very little was found above 2,000 ft., Durham said.

Coast Route 12-Yrs. Old

Pacific Coast scheduled air transportation was 12 years old Sept. 15, on the anniversary of the first service offered by Pacific Air Transport between Los Angeles and Seattle. Six P.A.T. pilots still are flying the route on United Air Lines. They are Capt. Grover Tyler, Frank Anderline, Heber Miller, Ralph Virden, Dick Bowman and E. L. Remelin.

Parks Traffic Jumps

Western Air Express has discontinued service to Yellowstone and Glacier National Parks until they re-open next June. The line carried 1,102 passengers in and out of West Yellowstone, a 31% gain over last year. Yellowstone-Grand Teton air tours, which operated Saturdays and Sundays, attracted 216 tourists. Glacier National Park traffic total was 295.

Some Speed!

Performing an eye operation in Honolulu on the morning of Sept. 13, attending the meeting of the American Medical Association in Chicago as Hawaiian representative on Sept. 16-17, and performing another operation in Honolulu on Sept. 22, is the record recently established by Dr. Forrest J. Pinkerton, well-known physician in Hawaii. Dr. Pinkerton left Honolulu for San Francisco at noon on Sept. 13 by Pan American Clipper, finished his journey to Chicago via United Air Lines, and made the return trip over the same airlines. Including stop-overs, his 9,000-mile journey took 8½ days. This is believed to be world's record time between Honolulu and Chicago.

Change Gum

Several airlines are now dispensing Wrigley's Double Mint chewing gum to passengers in place of the small "P. K." packets. Stewardesses pass the sticks around in cardboard holders. Cotton apparently is a thing of the past. Lines not having stewardesses will probably keep handing out the "P. K." packets. Inland Air Lines is giving each passenger a small box containing five Raleigh cigarettes.

Northwest Names Girl Agent

Northwest Airlines executives believe Miss Jane Surface is the first full time traffic representative of her sex to be named in sole charge of an office. She began her duties at Great Falls recently. There have been other girl traffic representatives, it was said, but none in full command of a city agency. She is a native of Salina, Kan., and is a graduate of the University of Kansas.

Awards 10-Year Pins

Four employees of Pan American Airways have been awarded 10-year service pins recently: Wilbur W. Bradley, R. H. Fatt, Jr., and A. M. Wright, all stationed at Miami, and Althea Lister, at New York.

Awards to American Airlines Personnel



Special awards for distinguished and meritorious service outside the line of regular duty were awarded to five employees of American Airlines recently at Chicago Municipal Airport. Pictured are the recipients as they received the awards from C. R. Smith, president of American. From left to right they are: Stewardess May Bobeck, cited for her service of more than five years as a stewardess, during which time she traveled over 1,250,000 miles (award of merit); ex-Stewardess Lillian Robichaud, the first woman ever to receive an award for distinguished service of valor; Willard Reed, Jr., supervisor of reservations (award of merit) and Howard Tiffany, supervisor of reservations at Newark (award of merit), in recognition of their work in developing a speedier reservation system; Capt. L. W. Harris, veteran pilot on Chicago-Newark division who has 11,000 hours of flying time (award for distinguished service and valor).

A company committee, set up for the purpose of studying and analyzing the work of all employees, makes recommendations for the awards. It is headed by Ralph S. Damon, vice-president in charge of operations.

American Completes Its Douglas Equipm't Plan

American Airlines Sept. 25 completed a long planned program to equip its entire system with Douglas craft by replacing 8-passenger Stinson A ships with DC-2Bs on the Washington - Charleston - Huntington-Cincinnati route. Huntington, W. Va. was added as a stop on the same day. The Douglasses being added are equipped with Wright Cyclone T-2B engines with Hamilton Standard Constant Speed controllable pitch propellers.

American now operates Douglas sky sleepers on the southern trans-continental route from Washington to Los Angeles; clubplanes from Washington to Chicago and Washington to Boston; and Douglas DC-2 planes on the rest of the company's total 6,701 miles of aerial routes.

American's Newark Fee Up

Newark, N. J., Sept. 15—American Airlines' operations fee at Newark airport will be increased about \$1,700 a month, following expiration Aug. 1 of a lease which it took over from the old Colonial Western Airways, said to be the first company to locate at the field. Previously, city officials said, American's payments to the city have been much below those of other lines. The company will continue to pay \$744.62 a month additional for hangar rent and ground fee.

Letting the World Know

Capitalizing on the world's record of 532 passengers carried out of Newark Airport on Friday Sept. 2 by his company, Jack Robinson, manager of American Airlines' agency and steamship department, recently issued a poster stating that "from available reports it appears that American's flagships carried more than half of all airline passengers leaving or arriving at Newark on Friday, carrying a total of 954."

New Top for WAE Traffic

Los Angeles, Sept. 20—A new all-time record for passenger traffic was established during August by Western Air Express, when the company flew 1,578,971 passenger-miles, a 46% increase over August, 1937, and 23% better than July, 1938. The 5,200 passengers carried represent a 48% increase over August last year, and a 17% rise above July of this year. Summer excursion fares and direct service to Yellowstone and Glacier National Parks were responsible for the gains, according to Alvin P. Adams, president.

Berth Trend Up

In comparison with the prejudice that has grown up against upper berths on trains, United Air Lines reports that many of its passengers prefer the uppers to lowers. Uppers on sleeper planes are the same size as lowers, and both are longer than train berths, UAL states. All berths on the planes have individual air vents and windows. Also, it's not as hard to get into an upper on a plane because the berths are not as high as those on a sleeping car.

Delta Revises Schedules

Monroe, La., Sept. 13—Delta Air Lines, due to the discontinuance of the stop at Tyler, Tex., pending completion of airport improvements, has revised the flying times of Flights 1 and 2. Flight 1 now leaves Atlanta at 7:00 A. M., arriving in Fort Worth at 1:40 P. M. This is 40 minutes faster than the former schedule. Flight 2 leaves Fort Worth at 9:20 A. M., reaching Atlanta at 3:55 P. M., 15 minutes faster.

American's Invasion Of Toronto a Success

The official opening of the new Malton Airport at Toronto, Canada, by an American Airlines Flagship on Aug. 29 proved to be of greater news value than had been estimated earlier. Full details of the gala celebration in the Canadian city indicate that American Airlines not only reaped an exceptional harvest of the best type of air transport publicity, but made a favorable impression on Toronto officials. American wants to operate from Chicago to Toronto via Detroit.

Accompanied by Buffalo civic officials, including Mayor Holling, American's entourage landed on Malton Airport before a reception crowd of 2,500 persons. The Canadian Broadcasting Corporation reported the ship's movement from the time it left Chicago not only through its national network but through loudspeakers to the 120,000 attending the Toronto Exposition. American's sales representative, Norman L. Hess, handled a detailed broadcast of the ship's interior, with Capt. W. B. Whitacre describing the ship's instruments, radio, etc., and Stewardess Joan Waltermire describing the service features. First Officer Harry Clarke told the radio audience about the exterior of the ship.

Some 200 leading citizens attended the American Airlines dinner that evening at which C. R. Smith, president, spoke. While the flagship was at the airport, some 2,000 persons inspected the interior, and during five sightseeing flights 105 persons were taken up. About 40,000 persons drove to the airport to see the plane. Max Pollett, district sales manager at Buffalo, arranged the affair. Toronto newspapers were unusually lavish in giving American columns of space and scores of photographs.

Faulkner Replaces O'Malley

New York, Sept. 19—Stewart Faulkner, formerly American Airlines publicity representative in New England, has been appointed eastern publicity director for the company, with headquarters in New York City. Faulkner replaces Miss Patricia O'Malley who resigned to join the Civil Aeronautics Authority Publicity Section. Leo J. Boyle, Miss O'Malley's assistant, has taken over Faulkner's position in Boston, according to Charles A. Rheinstrom, vice president of American.

Hubble Resigns

Les G. Hubble, assistant superintendent of overhaul and repair for United Air Lines at Cheyenne since 1936, has resigned effective Oct. 1.

Tourtelot to Tampa Post

National Airlines has appointed Jack Tourtelot its district traffic manager at Tampa, Fla.

Airline Personnel

Leslie Hables has been appointed reservation agent for United Air Lines at King City, Cal.

Tom Marshall has been appointed assistant station manager and traffic representative at Sheridan, Wyo. Total number of IAL employees is now 52.

Pete Miller has succeeded Frank Asher as UAL manager at Pendleton, Ore.

Ken Axvig has been named radio operator for Northwest Airlines at Wenatchee, Wash. He succeeds Orval Hill who has been transferred to the Yakima airport. Axvig will work with Howard Watson, station manager and Howard Wacholtz.

I. C. C. Examiner Proposes Substantial Increases for Continental Air Lines

An increase from 29 to 33 1/3c a mile in mail pay and from 32,000 to 60,000 in base monthly mileage on route 29, from Denver to El Paso, was recommended for Continental Air Lines, Inc., in a recent proposed report prepared by A. G. Nye, Interstate Commerce Commission examiner. The increases are retroactive to October 6, 1937.

Continental had asked that base mileage be advanced to 78,600 miles monthly, but Nye did not believe this to be justified in view of the fact that the company is now operating on an average of 57,000 miles a month. Although it did not appear on the record, the request for 78,600 miles is believed to include a contemplated circuitous route through the oil regions of New Mexico. W. I. Denning, counsel for Continental, stated that no protest to the proposed report would be entered.

In his recommendation, Nye considered "volume of mail and the distance carried, losses suffered by the carrier during the past year or more, the probable development of passenger and express business, the equipment changes required in the event of the future revision of schedules, the present length of the route and schedules being flown, the indirect competition from other air transport companies for

a part of the transcontinental business, and the directions and limitations of the statute respecting the determination of a fair and reasonable rate."

During the period from July 1, 1937 to June 30, 1938, Continental scheduled approximately 575,345 miles of mail-passenger service, of which about 93% was flown. During that period about 30% of the seat-miles operated were used by revenue passengers. Mail load has averaged approximately 38 pounds per mail mile. In June, 1937, operating costs were increased by purchase of two new twin-motored six-passenger Lockheed 12-A's, at a cost of \$50,000 each, and an additional 12-A was acquired later.

Operating revenues from July 1, 1937, to June 30, 1938, rose to 36.16¢ per mile, the greater part of the increase being in passenger revenue. "This was due in part to an intensive advertising campaign about the time of the installation of the new equipment and extension of the route into Denver," Nye stated. Operating costs for the same period increased to 39.20¢ per mile.

For the year ended June 30, 1938, Continental had a loss of \$17,061, and estimated that its operating deficit for the July-December, 1938, period would be approximately \$3,647.

Pan Am Mileage 53,166

Pan American Airways is operating 53,166 miles of airways serving 47 colonies and countries, according to latest figures released, as of June 1. A total of 997,443 passengers have been carried in company history and 364,421,048 passenger miles flown. There are 138 airliners and 143 ground radio control stations in operation. The company employs 4,900 persons.

Pilots Were Collegiate

About two-thirds of American Airlines' 241 pilots attended college before entering commercial aviation, the company announces. Outstanding among the 170 college educated men are First Officer George Shoemaker, national intercollegiate wrestling champion of Lehigh, and Reserve Captain Fred B. Bailey, a 12-letter sport star at Emory-Henry College. In addition to their sports achievements, both men are proficient in foreign languages.

IAL Daily Mileage to 3000

Inland Air Lines planes now fly 3,000 miles on six schedules daily, Marvin W. Landes, vice-president, reports. The firm now employs 15 pilots for its six Boeings and two Lockheeds.

Studying at Miami

Miami, Sept. 24—Pan American Airways has transferred the following personnel from the western division to Miami for maintenance, navigation and radio courses here: William E. Davis, Jr., T. S. Albert, E. D. Avary, K. A. Harcos, T. S. Terrill, and S. L. Fahey, all apprentice pilots. They will be assigned to flight duty after completion of training. Apprentice pilots Robert M. Elzey and L. C. Lindsey have been stationed on the Atlantic division since completing courses at the school.

NEARLY 9,000 MILES of airways in the U. S. have been added to the service of the air express division of Railway Express Agency in the last eleven months, the company reported Aug. 1. Total mileage now is 37,970, compared with 29,080 on Aug. 31, 1937.

Mike Murphy, control tower operator at Newark Airport, and Miss Gertrude Marie Croghan were married on Sept. 17.

The Youngsters Are Learning Early



Larry Jr., and Jimmy Fritz, sons of the eastern region superintendent of TWA, are shown with their father, L. G. "Larry" Fritz, veteran TWA pilot, in the traffic control tower at Chicago Municipal Airport as Maurice Maloney directs traffic. The rapt expression on the boys' faces would indicate that Larry is going to have a time keeping the boys in school long enough for them to finish their studies.

B-M BASE MILEAGE INCREASED BY I. C. C.

Rules P. O. Should Not Have Considered Extensions in Computing Mail Payments

The Interstate Commerce Commission on September 6 adopted the proposed report of Examiner F. A. Law, Jr., and ordered that the base mileage on AM27, operated by Boston-Maine Airways, between Boston and Caribou and Boston and Montreal, be increased from 24,000 to 38,500 miles at 33 1/3c per airplane mile.

The order was the result of a protest entered by the carrier to the effect that the Post Office Department, in computing total mileage flown each month, had included extensions to the original route, although the I.C.C. had never fixed a rate for the extensions, and that such inclusions resulted in the company's mail pay being decreased by more than 2c per mile for several months. Pay for the extensions was the result of an agreement between the carrier and the P.O.

In August, 1937, the extensions in question increased the mileage flown per month on AM27 from 24,000 to between 38,500 and 40,000. The original route came under the 180% classification, i.e., a route on which the mileage substantially equals one round trip a day over the period of one month. The I.C.C. "sliding scale" for mail payments does not apply until the mileage flown exceeds 180% of the base, after which time there is a one cent decrease for every 10% increase in mileage. If extensions had not been considered by the P.O., the company stated, the monthly total would never have exceeded 180% of the base.

Because of the I.C.C. order, it will now be necessary for the P.O. to recompute the mail pay on the original route alone, back to the time the extensions were granted, and to make separate payment for the extensions, probably at the 33 1/3c rate. This will result in a considerable payment to the carrier. The fact that the P.O. considered total mileage instead of just that on the original route, in computing mail payments, has been called a "reasonable mistake."

Tampa-Miami Changes

W. A. Berlin, of Miami, has been appointed district traffic manager at Tampa for Eastern Air Lines, which will start Tampa-Atlanta-Memphis service Oct. 8. He has been d.t.m. at Miami for EAL for four years. EAL offices will be at Peter O. Knight airport temporarily. E. M. Henning was appointed d.t.m. at Miami.

Public Relations

American Airlines has made two innovations in its relationships with the public which apparently have proved to be psychologically valuable. No employee can mention the word "weather" in talking with passengers. The term used is "flight condition." When thunderstorms are brewing it may be good flying weather and yet it's difficult to tell the passenger that the "weather is good." The term now used gets around the matter nicely. Another innovation is the increasing use of the word "sales" instead of "traffic" when referring to the sales force. The title "traffic manager" has little meaning to the public but everyone knows what "sales manager" means. C. R. Smith, American Airlines president, is given credit for both ideas. He is No. 1 Idea Man in the company.

FOREIGN

England's Largest Landplanes In Production - Seat 40 Passengers

Ensign Series of 14 Ships Leaving Factory at Rate of One Each Month; Eight Will Fly in Indian Service; Top Speed Approximately 202-MPH.

Great Britain's Imperial Airways shortly will put into service the first four of 14 Armstrong Whitworth 21-ton all metal highwing monoplanes, each with four motors. Six will have provision for 40 passengers and crew of five. The *Ensign*, first of the fleet, has been test flying since early this year. Three others are completed, a fifth is almost ready for tests, and hereafter the successors will be turned out at about 4-week intervals. Total cost will be about 750,000 pounds, or approximately \$3,320,000. Eight will be used in India where their introduction will make possible extensive reorganization and rearrangement of routes. These eight, because of heavier mail loads, will carry 27 day passengers or 20 berths. Each of the three cabins will be 13-ft. long, 8-ft. 8-in. wide, with height varying from 8-ft. to 9-ft. 2-in.

The craft, Britain's largest landplanes, have a maximum speed of about 202-mph at 7,000-ft., cruising speed of about 165-mph.; length of 114-ft.; span of 123-ft. The monocoque fuselages have no internal bracing. Power is generated by four Armstrong Siddeley Tiger IX, 14-cylinder, radial air-cooled engines, with controllable pitch propellers. Maximum output at takeoff is nearly 3,600-hp. Takeoff is accomplished in about 20 seconds without wind.

"The immense landing wheels and undercarriage struts are the largest ever installed as retractable units," according to the Society of British Aircraft Constructors. Tires are 6½-ft. in diameter.

From nose to rear of the fuselage are: captain and co-pilot compartment, behind which is the radio operator's chair; smoking cabin, freight compartment, desk of ship's clerk, galley, lavatories and promenade decks, midship and after cabins. After there are a lavatory, passengers' entrance vestibule, and another express compartment. Each of the salons will have an emergency exit, a sliding panel in the roof. Entrance to pilot's compartment may be either by means of a door from passengers' section, or through a trap door in the floor. Unusual feature is a hot water heating system. Miniature boilers will draw heat from the engine exhausts and start circulation through a pipe system. A system of branch pipes will supply cold air. Temperature will be controlled by the steward. Interesting to Americans, whose biggest planes have been equipped with double tails, is this statement from *Shell Aviation News* (British): "Twin rudders are unnecessary on the *Ensign* as, owing to its unusual length, a single rudder gives sufficient directional control."

The *Ensign* is about 13-ft. longer than the DC-4, but its span is 13-ft. less, height 2-ft. 6-in. less, gross weight about 16,500-lbs. less, useful load about 1,000-lbs. more, its maximum power at takeoff about 2,000-hp. less, its maximum and cruising speed about 38-mph. less than America's largest landplane. Landing speed of both is about 67-mph., but the DC-4

will be aided by a tricycle landing gear. Absolute ceiling of the DC-4 series is about 24,000-ft., compared with the *Ensign's* 18,000-ft.; service ceiling of the Douglas is about 22,900-ft., and that of the British giant 16,000-ft. Maximum cruising range of the DC-4 is 2,200-miles (with fewer than 42 passengers), while that of the Armstrong Whitworth is 800 miles.

GREAT BRITAIN

A total of 23,647 persons is reported enrolled as members of the new Civil Air Guard (AMERICAN AVIATION, Aug. 15) and there are now established 75 lightplane clubs.

Britain's RAF recruiting drive, with a goal of 31,000 officers and men by Mar. 31, 1939, is progressing at the rate of about 600 enlistments a week, according to the Society of British Aircraft Constructors.

PRAISE. The British aviation magazine, *Flight*, has a good word to say for U. S. accident reports. Referring to the comprehensive report issued by the Department of Commerce on the UAL DC-3 crash near Cleveland last May, the magazine says: "One can give due praise yet again to the very thorough way in which evidence concerning American transport accidents is collected and published in the greatest possible detail. Our own reports are meagre by comparison."

SOUTH AMERICA

A six-day air mail and passenger service from Ecuador to Berlin via Lima, Peru, has been promised shortly by the German Sedita Company. The company now flies from Guayaquil to Quito, both in Ecuador, three times a week, and plans once-a-week service between Quito, Bogota and Lima. A new 25-passenger, tri-motored Junkers, named the *Ecuador*, was recently flown from Rio de Janeiro to Guayaquil by the company.

JAPAN

The Japan Air Transport Co. will soon increase capitalization from 10,000,000 yen (\$2,870,000) to 50,000,000 yen (\$14,360,000) following recent government approval, according to the office of the American Commercial Attache in Tokyo.

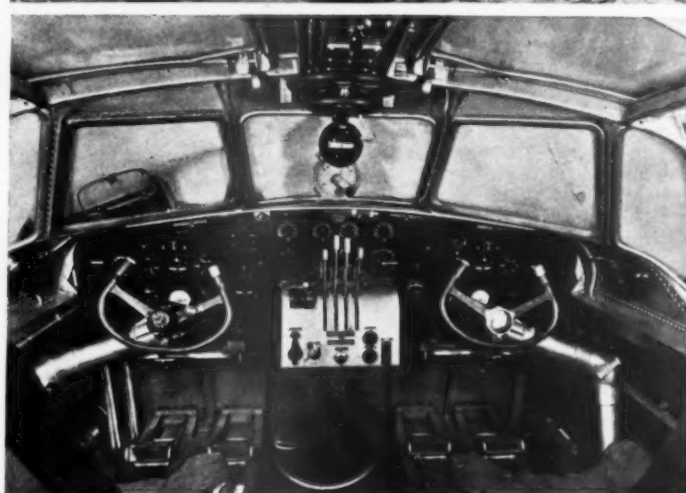
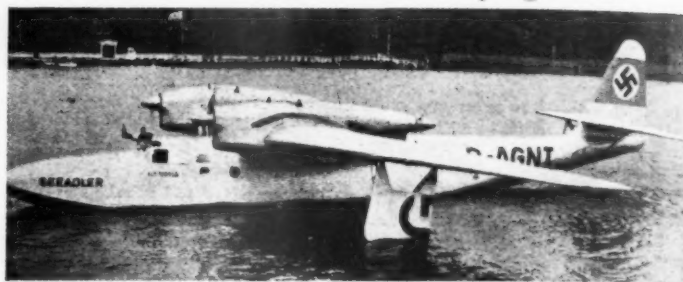
Dominion Lines Co-Operate

Four Canadian airlines have formed the Midwest Air Traffic Board, in order to insure equality of rates and rules to each customer and to protect themselves against rate-bargainers. Wings, Ltd.; Starratt Airways, Ltd.; Canadian Airways, Ltd., and General Airways, Ltd., are the members of the board.

KLM Gets Wright Engines

KLM Royal Dutch Air Lines has received its first consignment of Wright Cyclone G 105 engines, which have special advantages for flying at great heights. The engines' two-speed supercharger systems make it possible to run them at a higher pitch for a longer time, and KLM will use them on such routes as the Rome Air Rapide, which crosses the Swiss Alps between Frankfurt and Milan.

Dornier's Latest in Ocean Flying Boats



Views of the new Dornier Do. 26. Side view from *Flight*, others from *European*.

Nazis' New Atlantic Seaplane Launched

The Dornier *Seeadler*, Germany's latest flying boat designed for North Atlantic service, has aroused wide interest in European aviation circles since it was first tested September 1. The four Diesel engines (water cooled Junkers Juno 205, 600-hp. each) are arranged tandem style, the rear propellers having elongated shafts for aerodynamic efficiency and to insure necessary wing clearance. It is said that flight may be sustained on any two motors. All are accessible in flight. The rear power plants may be raised through an arc of 10 degrees to protect airscrews from takeoff spray.

Maximum speed is announced as 208-mph., cruising speed as 192-mph. and landing speed as 68-mph. Floats which retract into the wing have replaced the lateral spars of earlier Dorniers, says the British weekly, *Flight*.

The craft, when launched by catapult, can carry four passengers and more than 2,200-lbs. of mail non-

stop between Lisbon and New York. The two-step type hull has eight watertight compartments, and accommodates all fuel. One mail and express chamber is in the nose ahead of the pilots, and another is aft. Provision is made for four crew members. There are wireless and navigation rooms. Details, as announced by *Flight*:

Span, 98-ft. 5-in.; length, 80-ft. 4-in.; height, 22-ft. 5-in.; weight, empty 22,487-lbs.; useful load, 21,605-lb.; total weight (catapult start) 44,092-lb.; wing loading, 32.91-sq. ft.; engine loading 18.29-lb. hp.; cruising range 5,600 miles.

Graf in Test Flights

The new Graf Zeppelin LZ130 is at present undergoing flight tests and it is reported that results to date have been satisfactory. During the winter, the dirigible, which is using hydrogen, will be stored at Frankfurt. Dr. Hugo Eckener, assisted by Capt. Hans von Schiller, has been in charge of the tests. No Atlantic crossing will be made with hydrogen Dr. Eckener declared.

Solar Completes Its 5000th Manifold



Lon E. Wheeler, vice-president of Solar Aircraft Co., San Diego, is shown here adding the finishing touches to the 5,000th stainless steel exhaust manifold produced by the company. The firm announces that it has produced more than the combined output of all other manufacturers producing similar assemblies.

Solar Turns Out 5,000th Manifold

San Diego, Cal., Sept. 14—Lon E. Wheeler, vice-president in charge of production at Solar Aircraft Co., walked into the shop a few days ago, donned welder's goggles, and added the finishing touches to the 5,000th Solar manifold. It was in 1928, just 10 years ago, that Solar engineers discovered the drop-hammer process of manufacturing stainless steel exhaust manifolds.

This was the answer to the problem of producing a perfect collector ring for aircraft motors that would stand up under terrific heat and corrosive elements. It also became the answer to the problem of how Solar could survive the panic following the '29 stock crash. Even successful planes like Solar's model MS-1 all metal transport weren't selling.

In 1930 the Navy ordered two manifolds for test. It was experiencing difficulty with straight stack exhausts, which caused distortion in the pilot's vision during night landings due to the glare from the red-hot metal. Further, the old type failed to carry the carbon monoxide fumes away from the pilot's compartment. A year and a half after they were installed, the two Solar models were still in service. Contemporary manifolds lasted only from four to six months, even with frequent overhauls. Solar's future in this specialized branch of the industry was assured.

Now the company employs more than 200 men, 23 of whom have been with the company more than five years. One of the first welders was Lon Wheeler, and therein lies the significance of the ceremony attending the completion of the 5,000th product—one of eight to be delivered to Consolidated Aircraft Corp. for a PBY-4 flying boat. In the last fiscal year sales amounted to more than \$500,000. Solar manifolds built for Sikorsky and Martin clippers were still in service after 8,000 to 10,000 hours of flying. They have been all over the world including the north and south poles, and are on daily routine assignments in this country and Europe on the standard Douglas and Boeing transports.

Miller Won't Move Plant

Springfield, Mass., Sept. 20—Despite dissatisfaction with the local airport, Miller Aircraft Corp. will remain here, Howell W. Miller, president, has announced. The Miller MAC-1 is undergoing Army tests at Wright Field.

Vultee Names Officials

Los Angeles, Sept. 14—V. Charles Schorlemmer has been appointed controller of Vultee Aircraft Division of Aviation Manufacturing Corp., G. T. Bovee has been named chief auditor, William C. Rockefeller is now in charge of aerodynamics and P. A. Hewlett will manage the New York sales office. Richard W. Millar, vice-president and general manager of Vultee, made these announcements yesterday. Mr. Schorlemmer had been treasurer of Aviation Corp. and Aviation Manufacturing Corp. with offices in Chicago.

Consair Layoff Survey

San Diego, Calif., Sept. 12—CIO Aircraft Local 506 is conducting a survey to determine what effect layoffs at Consolidated Aircraft Corp. have had on nearby business. The local sponsored a resolution adopted by the California state convention of the CIO in Los Angeles last month calling for government operation of aircraft factories. The American Federation of Labor local represents Consolidated employees in collective bargaining, having defeated the CIO in an election.

Harlow Plane Out Soon

Harlow aircraft interests in Los Angeles are expected to make an announcement shortly of a new two place closed land monoplane offering a number of departures in design, and high speed and economical operation. Sales representatives and an advertising campaign are being lined up, it is reported. The first model, designated PJC-1, received type certificate 659 on Aug. 26. The ship will be powered with a Warner Super Scarab 145-hp. motor, series 50. Rumors on the west coast are that Howard Hughes is an associate in the firm.

Dies in Plant Fire

Alliance, O., Sept. 15—A fire which destroyed the frame paint shop of the Taylor-Young Airplane Co. at 3 a. m. Aug. 23 has cost the life of one employee, Carlyn Woods, 20 years old. Tommy Jones, who was seriously burned, is still in the hospital. Walter Myers, who suffered severe burns, is out of danger. Origin of the blaze has not been determined. It spread quickly, causing an explosion which fired the dope-soaked garments of the workers. Three other employees volunteered for blood transfusions. Dope operations are now being conducted in a tent to meet production requirements.

American Export Buys Flying Boat For 1939 Atlantic Survey Flights

American Export Airlines, Inc., wholly-owned subsidiary of American Export Lines, announced Sept. 14 the purchase of a \$200,000 long-range patrol boat from Consolidated Aircraft Corp., San Diego, for making survey flights across the Atlantic preparatory to regular service. The announcement was made by W. H. Coverdale, president of the parent company and its airline subsidiary, from his office at 120 Wall Street, New York City.

Coincident with this announcement came unofficial reports that the company plans to issue common stock to the extent of about 100,000 common shares, with a preferred issue later. So far the airline subsidiary has been financed by the steamship company, Lehman Brothers, closely identified with both American Export and Consolidated, would handle the financing program.

Organized about a year ago, American Export officials have secured permission from the United States and principal foreign countries in the Mediterranean for survey flights. Plans call for an airline to operate between this country and Europe, serving a number of countries from Spain and Portugal to the Black Sea along the trade routes operated by the steamship company for 20 years. James M. Eaton, vice-president of the airline, has been prominent in the line's activities and appeared a number of times before Congressional committees during the last session recommending that the U. S. provide subsidies for trans-Atlantic air services.

The Consolidated patrol boat will be a commercial version of the well-known PBY boats built for the Navy. It will be a 15 ton, two-engined, semi-cantilever monoplane with a top speed of 200-mph. at 8,000 ft. It will be flown with a crew of six. At cruising speed the ship will have a range of approximately 4,000 miles with a payload of 2,000-lbs.

Consolidated reported that specifications and prices for larger, faster and more luxurious aircraft for non-stop trans-Atlantic passenger, mail and express service are now in the hands of American Export officials. At least one other manufacturing company has submitted specifications and prices also.

Survey flights will start from New York next spring. The parent company's steamships along the routes to be flown will serve as floating weather observatories and mobile bases, furnishing weather reports and other data. It is understood that American Export is not interested in flying to London and expects to restrict its operations to the Mediterranean.

Lockheed Ad Schedule

Beaumont & Hohman, Los Angeles, advertising agents, announce that Lockheed Aircraft Corp. has started a campaign in 10 aviation publications, four in the United States and others in Canada, England, Australia, Holland and South America.

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SOLAR Aircraft COMPANY

LINDBERGH FIELD SAN DIEGO • CALIF

Vega Feeder Liner, Unitwin Powered, to Carry 6 at 200-Miles an Hour

New Lockheed Subsidiary Makes First Announcement of Craft Employing Tandem Motors and One Aircrew; First Model Ready About Jan. 15

First details of the new plane now in production by Vega Airplane Co., Lockheed subsidiary, were released Sept 12 by Mac Short, Vega president. As already announced, the craft will incorporate the Unitwin engine installation, a new type power plant which embodies two Menasco motors in tandem operating a single constant speed propeller. It will be a low-wing metal monoplane, similar in appearance to the Lockheed, seating five or six persons, equipped with retractable tricycle landing gear, and is expected to have a top speed of more than 200-mph. Non-stop cruising range will be about 1,000 miles. The first model will be completed about Jan. 15, according to Mr. Short.

Two cabin versions are to be available, the custom or private owner type with provision for five persons, and the feeder airline type accommodating pilot and five passengers. In both the cabin will be sound proofed, heated and ventilated.

Aerodynamic features include trailing edge wing flaps, and twin rudder and fin arrangement.

"The wing will be of metal and there will be two main panels bolted directly to the fuselage truss," it was announced. "With this arrangement there will be no center section in the airplane. Wing flaps of metal structure and fabric covered will be provided in each wing panel, and in addition there will be a center section flap of split-type metal construction. Ailerons will be fabric covered, with static and dynamic balances. The tail group will consist of an all-metal stabilizer, fabric covered elevator equipped with a trimming tab for maintaining longitudinal balance, and twin vertical metal tail surfaces mounted at the tips of the stabilizer."

The two main wheels of the landing gear will retract into the wings, while

the nose wheel will be raised into the engine compartment. Even when retracted, all wheels will still provide for emergency landing, Mr. Short said.

As previously reported in AMERICAN AVIATION, the two 260-hp. Menasco will have a gear system of over-running clutches which operate on the same plan as the automobile overdrive installation. Close synchronization of the two (in-line) motors is unnecessary as they continue to run at the same speed even though the power output of one may be exceeding the other. If one engine stops, its inertia need not be opposed by the motor still operating. By placing both engines in one center compartment, the designers have almost eliminated excessive drag from wing nacelles.

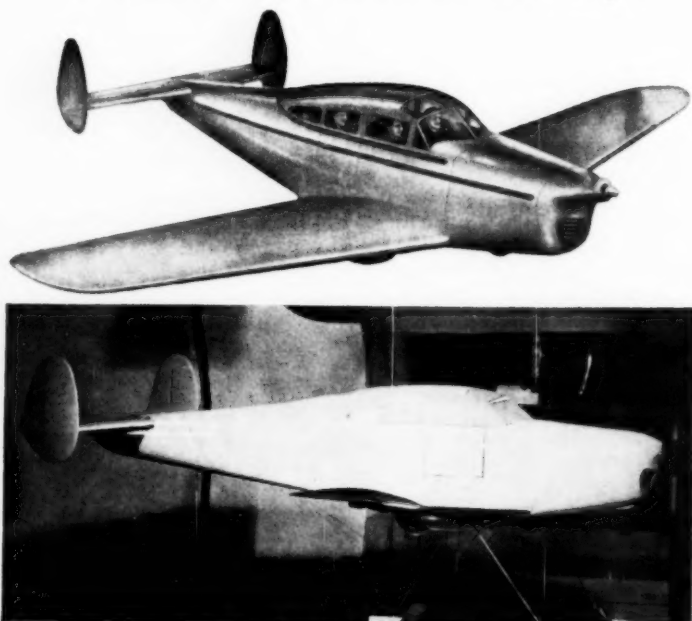
The forward section of the body will be steel tube truss upon which is mounted the cabin shell fabricated from aluminum alloy. The rear section will be a semi-monocoque structure of aluminum alloy and will be attached to the steel tube structure aft of the cabin. The power plant will be supported by a welded steel tube engine mount removable from the forward structure of the cabin.

The main baggage compartment, below the rear seats, may be loaded through an exterior door in the side of the cabin. Mail may be carried in the wing adjacent to the cabin. Wing span will be 41-ft., overall length will be 31-ft. 5½-in. Height will be 9-ft. 1-in., and estimated gross weight is 5,411-lbs.

NACA Gets Ryan

Langley Field, Va., Sept. 19—The National Advisory Committee for Aeronautics recently has taken delivery here on a Ryan S-T-A Special, for use in new flight research projects. The low-wing, metal-fuselaged monoplane is powered with a 150 hp. inverted in-line Menasco engine.

Lockheed's New Menasco Powered Vega



First illustrations of Vega Airplane Co.'s new low-wing monoplane. Top: Drawing of the plane as it will appear in flight. Lower photo: Wind tunnel model of the ship.

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U.S. LINES EMPLOY 12,546, CAA SAYS

Report Shows 93% of Scheduled and Extra Trips Started in First Six Months; Average Passenger Rode 436 Miles

Total employment on American-operated airlines, both domestic and foreign, was 12,546 persons at the end of the first six months of 1938, the Civil Aeronautics Authority reported Sept. 13. Classification was as follows: 795 pilots, 635 copilots, 3,393 mechanics and riggers, 2,721 other hangar and field personnel, 4,567 office workers, 321 stewards and 126 stewards.

It was also announced that the domestic lines had 51,888 trips scheduled, of which 48,628 were started. In addition, 1,246 extra sections were flown. Of all trips, 93.86% were started, and 88.44% were completed. A total of 48,994 or 94.23% of the trips started was completed.

"Average speed for all domestic lines was 152-mph., ranging from an average of 107-mph. reported by one line to 176-mph. reported by another. Average length of each passenger's trip was 436 miles. Passenger load factor (percentage of available seats used) was 56.73%," the CAA bulletin said.

As shown in a table published elsewhere in this issue of AMERICAN AVIATION, American-operated lines during the first six months of this year flew 2,113,634 more miles and carried 113,511 more passengers than in the same half-year of 1937.

At the end of the period there were 362 planes in operation on scheduled lines, which had consumed 21,606,485 gallons of gasoline and 396,076 gallons of oil.

\$933,168 Loss

For TWA in 6-Mos.

Transcontinental & Western Air, Inc., has announced a net loss for the six months of \$933,168.80. This compares with a net loss of \$487,141.47 covering the same period of 1937. Total operating revenues were up, however, the \$2,656,022.95 total for 1938 being \$245,769.21 above last year. Increasing operating expenses, which totaled \$3,516,358.95 for the period, as against \$2,943,057.73 for the same period in 1937, are responsible for the increased loss, Jack Frye, president, said in his report.

During the period TWA operated 33,427,440 revenue passenger miles, an increase of 20.17% over the same period in 1937. Mail and express revenues were \$49,378.79 less than for the same period last year.

Canadian Car Signs

Mexican Plant Contract

Montreal, Sept. 16—The Canadian Car & Foundry Co., Ltd., of Montreal, has signed a formal contract with the Mexican government to establish an aircraft manufacturing plant in Mexico City. Foreign technicians will supervise the building, which will start within a month. The company is seeking contracts for war planes with Colombia and other South American governments.

The Mexican government will receive 50% of the company's profits, the company has agreed to build planes for the Mexican air service, and it is required that 90% of the employees shall be Mexicans. General Manuel Avila Camacho, secretary of Mexican national defense, who signed the contract for his government, estimated that 1,500 men will be employed within a year after the factory opens.

BUSINESS AND FINANCE

Air Carrier Operations Statistics January-June, 1937-1938 (C.A.A. FIGURES)

	January-June 1937	January-June 1938
Domestic		
Miles flown	31,147,776	33,142,289
Passengers carried	464,068	576,319
Passenger miles flown	204,516,204	251,138,379
Available passenger seat miles flown	367,826,377	442,716,419
Express carried (pounds)	3,416,666	2,991,657
Express pound miles flown	2,044,565,967	1,862,792,904
Mail carried (pounds)	9,834,493	(1)
Mail pound miles flown	6,415,816,653	7,156,705,087
Mail payments	\$6,256,068.56	\$7,187,473.69
Foreign		
Miles flown	5,373,244	5,592,365
Passengers carried	89,246	90,506
Passenger miles flown	37,162,240	38,415,985
Express carried (pounds)	844,732	951,696
Mail carried (pounds)	361,615	373,589
Mail payments	\$3,928,548.19	\$4,313,794.83
Domestic and Foreign		
Miles flown	36,521,020	38,734,654
Passengers carried	553,314	666,825
Passenger miles flown	241,678,444	289,554,364
Express carried (pounds)	4,261,398	3,943,353
Mail carried (pounds)	10,196,108	(1)
Mail payments	\$10,184,616.75	\$11,501,268.52

(1) Not available.
(2) Hawaiian operations are included in these figures.

Boeing Loss is \$35,975 for Year To June 30; May Lose on Clippers

Boeing Airplane Co. for the 12 months ended June 30 reports a net loss of \$35,975, stating that in the June quarter of this year its loss reached \$41,746. This compares with net loss of \$52,015 in the first quarter and net profit of \$137,960 in the second quarter of 1937. Indicated net loss for the first half of 1938 was \$93,761, against net profit of \$253,897 in the first half of 1937.

For the year ended Dec. 31, 1937, a consolidated net profit of \$311,683, equal to 51c a share on approximately 611,000 average number of shares of capital stock, was reported.

Consolidated income account for the 12 months ended June 30, 1938, is as follows: gross sales, less returns and allowances, \$3,605,543; costs, expenses, etc., \$3,526,322; depreciation, \$113,216; loss, \$33,995; other income, \$26,662; loss \$7,333; interest on notes payable, \$2,237; federal and state income taxes, etc., \$26,405; net loss, \$35,975. The loss includes inventory write-downs made for the purpose of reducing the carrying value of certain experimental contracts to proportionate sales value as at June 30, 1938.

Indicated sales and other revenues for the second quarter of this year were \$410,664, compared with \$1,058,305 in the first quarter and \$2,134,532 in the second quarter of 1937.

Boeing has been concentrating mainly on the production of the six four-engine 40-ton flying boats for Pan American Airways, and the eight four-engine land transports for TWA and Pan American. These operations were not reflected in the six months' report because deliveries have not been made. There is some question, it is stated, as to whether the company will make a profit on the four-engine equipment, primarily because of increases in construction costs since contracts were signed in 1935.

Profits in 1937 were derived mainly from delivery of the first 13 "flying fortresses" to the Army. The company has orders for 39 more, but deliveries are not scheduled until early 1939.

2nd Grumman Dividend

Grumman Aircraft Engineering Corp. on September 13 declared a second dividend of 25c a share on common stock. The other dividend was paid on June 27, last, following an initial payment of 25c in December. The company at present has a backlog of \$4,000,000, according to Leroy Grumman, president.

Cessna Profit Reported

Cessna Aircraft Co. reports a net income of \$2,748 for the period Jan. 1 to July 5, 1938.

Ryan Nets \$23,791; Lists Financial Changes

Ryan Aeronautical Co. in an uncertified consolidated statement reports net income of \$23,791.84 for the five months ending May 31, 1938 and an earned surplus balance as of that date of \$29,893.22. Balance in paid in surplus was \$64,679.43. On July 20, 1938, there were 269,650 shares of \$1 par value common stock issued and outstanding. T. Claude Ryan, president, as of May 31 owned of record and beneficially 49,729 shares of common stock representing 19.15% of the total then outstanding.

On Mar. 9 Fred H. Rohr exercised an option from Mr. Ryan on 3,600 shares, after having received on Mar. 5 a bonus of \$4,233.60. The agreement, dated Mar. 5, 1937, ending Mar. 6, 1942, provided for payment to Rohr as factory superintendent of a \$350 a month salary plus a bonus equal to 10% of the net profit earned by the sheet metal parts manufacturing department, if such bonus received by Rohr amounted to \$4,032 plus a reasonable interest charge from Mar. 6, 1937.

The report says depreciation rates are now computed on a straight line method, established as follows: buildings, 4%; heavy machinery, 10%; light machinery, 20%; heavy equipment, 20%; light equipment, 33 1/3%; large tools, 33 1/3%; small tools, 66 2/3%; zinc and lead, 25%; benches and racks, 10%; templates and patterns, 12%; jigs and fixtures, 15%; furniture and fixtures, 10%.

Other consolidated profit and loss figures for the five months ending May 31, 1938: gross sales, \$219,726.15; gross profit, \$48,240.43; operating revenues, \$40,718.75; operating expenses, \$11,407.83; maintenance and repairs, \$10,089.92; depreciation and amortization, \$3,322.04; taxes (other than income), \$2,473.45; rents and royalties, \$875; selling, general and administrative expenses, \$27,100.75; development expense, \$2,616.76.

Other income totaled \$1,751.29.

AIRLINES' SAFETY RECORD RELEASED

CAA Shows U. S.-Operated Companies Flew 1,844,507 Miles Per Accident in First 6 Months of 1938

American-operated air carriers flew 1,844,507 miles per accident and 13,161,571 passenger miles per passenger fatality during the first six months of 1938, it was announced Sept. 15 by the CAA.

In the five fatal accidents, 22 passengers, 5 pilots, 5 copilots, and 8 other crew members died. In 16 accidents there were no fatalities. Domestic lines had 15 accidents, flying 2,209,486 miles per accident. Foreign extension lines had 6 accidents, flying 932,061 miles per accident. The 21 accidents in both classifications involved 226 persons, of whom 186 suffered no injuries and 40 were fatally injured.

Accident causes:
Personnel errors 23.82%
Airplane failures 19.05%
Weather 19.05%
Airport terrain 9.52%
Other causes 9.52%
Undetermined and doubtful .. 4.76%

Types of accidents included: collision in full flight with objects other than aircraft, 1; landing accidents, 5; take-off accidents, 3; taxiing accidents, 2.

Comparisons of the first six months of 1938 with the same period of 1937 follow, figures in parentheses representing 1937:

Domestic: Miles flown 33,142,289 (31,147,776); total number of accidents 15 (25); miles flown per accident, 2,209,486 (1,245,911); miles flown per fatal accident 11,047,430 (10,382,592); miles flown per pilot fatality 11,047,430 (15,373,888); passenger miles flown 251,138,379 (204,516,204); total number of passenger deaths 21 (22); passenger miles flown per passenger fatality 11,958,980 (9,296,191).

Foreign: Miles flown 5,592,365 (5,373,244); total number of accidents 6 (3); miles flown per accident 932,061 (1,791,081); total number of fatal accidents 2 (0); passenger miles flown 38,415,985 (37,162,240); total number of passenger fatalities 1 (0).

Domestic & Foreign: miles flown 38,734,654 (36,521,020); total number of accidents 21 (28); miles flown per accident 1,844,507 (1,304,322); total number of fatal accidents 5 (3); miles flown per fatal accident 7,746,931 (12,173,673); total number of pilot fatalities 5 (2); miles flown per pilot fatality 7,746,931 (18,260,510); passenger miles flown 289,554,364 (241,678,444); total number of passenger fatalities 22 (22).

Passenger miles flown per passenger fatality in 1938 were 13,161,571 compared with the 1937 six month total of 10,985,383.

Air Associates Dividend

Board of directors of Air Associates, Inc., Sept. 7 declared the regular September quarterly dividend of 12 1/2c a share on the common stock will be payable Sept. 26 to stockholders of record Sept. 19. In addition, on account of the operation of the undistributed profits tax, the board declared the regular quarterly dividend of 12 1/2c a share, normally payable in December, 1938, will be paid at the same time and to stockholders of the same record date. The regular quarterly dividend of \$1.75 a share was declared on the \$7 cumulative preferred stock, payable Sept. 26, 1938, to stockholders of record Sept. 19, 1938, according to G. S. Kleverstrom.

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G. B. Granted Large Export License; Japan Leads August Buyers

Great Britain during August was granted a license to export \$1,152,057.72 worth of airplanes and parts from the United States, according to the Department of State. The license, which means that Great Britain may export the planes when they are completed, is to cover part of the orders placed in the U. S. with Lockheed Aircraft and North American Aviation. Other licenses to export large amounts were granted to Russia, \$485,514.00; Yugoslavia, \$307,700.00 and Japan, \$179,249.00.

Japan led in the actual export of aeronautical products from the U. S. during August, purchases amounting to \$1,267,529.00. Netherlands Indies, which has been steadily rising during the past few months, was second with \$1,147,780.00. China, third in the July standings, dropped to fifth place. Twenty other countries also made purchases in excess of \$10,000 during the month. The complete list follows:

Japan	\$1,267,529.00
Netherlands Indies	1,147,780.00
Rumania	408,829.00
Russia	306,768.44
China	298,718.00
Great Britain	221,021.12
Brazil	219,835.00
Australia	152,728.00
Bolivia	123,500.00
Netherlands	93,650.00
Curacao	81,100.00
Estonia	70,521.00
New Zealand	62,532.00
Sweden	55,653.50
Germany	55,460.00
Colombia	45,499.00

Countries purchasing smaller amounts from the U. S. during August included Bulgaria, France, Mexico, Nicaragua and Turkey.

Western Air Offering

Western Air Express reports to the Securities & Exchange Commission that of the 130,818 shares of stock offered to stockholders for subscription by the exercise of warrants, 33,111 shares were not subscribed for. The unsubscribed stock was purchased by underwriters at \$2 a share, in accordance with the terms and conditions of the underwriting agreement. Although underwriters had not expected to make public offering of the shares purchased by them, Western Air now announces their intention to do so sometime in the future at prices as yet undetermined. (Details of the earlier offering appeared in AMERICAN AVIATION, Apr. 1).

Incorporations

North Carolina—Rhinehart & Gibbons, Inc., principal office, Winston-Salem. To assist generally corporations and individuals engaged in aviation activities. Authorized capital stock of 20,000 shares, par value \$10. Subscribed stock, 30 shares, by E. C. Goodman, John S. Graham, Winfield Blackwell, all of Winston-Salem.

New Jersey—Papers have been filed by Paterson Airport, Inc., 5 Colt St., Paterson, Louis V. Hinchcliffe principal agent, to engage in commercial aviation and all its branches. Authorized capital stock is 2,500 shares without nominal or par value.

Ohio—Private Filers' Association, Columbus Airport. Non-profit organization, headed by Emanuel Pierret, Henry Wise, Henry Butowicz and Daniel Falkner.

Pennsylvania—Keystone Aviation Co., Wilford Bldg., 33rd & Arch Sts., Philadelphia.

Tennessee—Southern Aeronautical Institute, Inc., Nashville, capitalized at 500 shares, \$10 par value. Incorporators are Guilford Dudley, Jr., Frank J. Miller, and Wesley H. Dyer. To offer courses in repair, maintenance and operation of heavier than air craft and various other activities in connection with aviation.

Texas—El Paso Flying Service, El Paso; airplanes; capital stock, \$1,000; incorporators, Irving Adams, Mary Adams, Jerome A. Martin.

Rearwin Reports More Exports Than in 1937

Kansas City, Kan., Sept. 19—Exports of Rearwin airplanes so far during 1938 are better than during a similar 1937 period, according to Kenneth Rearwin, president of the company. Recent shipments of 90-hp. Sportsters have been made to H. T. Morton, Te Kuiti, New Zealand; Petronio Magalhaes, Rio de Janeiro (sold to David McMenamin, Rio de Janeiro); William Guy, Hobart, Tasmania; Guido Hauer, Curitiba, Brazil.

A 125-hp. Speedster has been shipped to Agathon Lutz, San Jose, Costa Rica. Purchase was made after a visit to the factory by Howard Crawford, former Universal Airways' pilot, now flying for Aerovias Nacionales, San Jose, Costa Rica. A Sportster is to be delivered shortly to Lightband & Wann, New Plymouth, New Zealand, and two will be shipped to Bangkok, Siam, for use by the Royal Siamese Air Force as trainers. The latter two planes will have special military paint jobs.

National & Chandler-Evans

National Aviation Corp. has bought 80,000 shares of common stock of Chandler-Evans Corp. for \$160,000 cash, and warrants to purchase 16,000 more shares at \$4 a share within five years from July 29, 1938, the Securities & Exchange Commission is informed. Chandler-Evans, established July 28 to manufacture aircraft carburetors, fuel pumps, and aircraft accessories, has 160,000 outstanding common shares and warrants to buy 32,000 shares additional.

Dart Asks Lease

Columbus, O., Sept. 24—Dart Manufacturing Corp. has asked the city to grant it a long-term lease on land at Port Columbus on which would be constructed a new airplane manufacturing building. Knight K. Culver, Jr., Dart president, hinted to officials the firm may move from Columbus unless the lease is granted.

Canadian Fairchild Loss

Fairchild Aircraft, Ltd., Longueuil, Que., for the 18 months to June 30, 1938, reports a net loss of \$56,730. The firm is building 18 Bristol Blenheim twin-engine monoplane bombers at present for Canadian military.

Sells Canadian Rights

Inglewood, Cal., Sept. 18—Negotiations have been completed for the sale by North American Aviation, Inc. of manufacturing rights on basic combat trainers to Noordyn Aircraft, Ltd., Montreal. North American is currently employing 3,600 men.

Corrigan Aircraft Corp.?

Dallas, Sept. 14—A \$250,000 aircraft factory with Douglas Corrigan as president and a group of prominent local oil men as financial backers was pictured as a possibility here today. The product would be a two-engine commercial type adaptable to feeder line use. The firm probably would be named the Corrigan Aircraft Corp.

\$303,132 Navy Contract

The Navy Department announced on Sept. 16 that North American Aviation, Inc., Inglewood, Calif., has been awarded a Navy airplane contract amounting to \$303,132.

PAA Extends Trippe Option

A report to the Securities & Exchange Commission reveals that Pan American Airways Corp. has extended from Dec. 31, 1940, to Dec. 31, 1941, the period during which it has an option on the services of Juan T. Trippe, president. In consideration of the extension, the option price of the 50,000 shares of stock of Pan American under option to him has been reduced to \$15 a share from \$20, and the time in which the option may be exercised has been extended from Dec. 31, 1940, through Feb. 28, 1942.

Boeing Wage Plan

Seattle, Sept. 20—Negotiations toward a new working agreement between the Boeing Aircraft Co. and its employees have been continued until Oct. 1 pending the Public Contracts Board's rehearing. "Our inescapable immediate problem is to 'make ends meet' now on our current business," Fred P. Laudan, vice-president and superintendent writes in the *Boeing News*. "Largely responsible for this problem is the fact that our wage rates increased greatly after the time our bid quotations were made on all our current contracts."

French to Build Wasps

East Hartford, Conn., Sept. 22—United Aircraft Corp. has granted the French government a license to manufacture the Pratt & Whitney twin-row Wasp airplane engine, it was announced yesterday. When questioned concerning the report that France was planning to buy 600 Wasp engines here, Donald L. Brown, president of United Aircraft, refused either to confirm or deny it. French officials stated yesterday that no such order had been placed as yet.

Contracts

The Department of Labor announced the following contracts, amounting to \$838,696.05, signed during the week ended Sept. 22 by various government agencies:

Eclipse Aviation Div. of Bendix Aviation Corp., E. Orange, N. J., transmission systems, Orange, \$211,710.00. Sperry Gyroscope Co., Inc., Brooklyn, N. Y., indicator assemblies, Army Air Corps, \$376,600.00.

Walter Kidde & Co., Inc., New York City, oxygen cylinder assemblies, Army Air Corps, \$125,984.00.

Eclipse Aviation Div. of Bendix Aviation Corp., E. Orange, N. J., starters, cartridge, navy, \$33,800.55.

Triumph Explosives, Inc., Elkton, Md., cartridges, aircraft, Navy, \$23,731.25.

United Aircraft Corp., Hamilton Standard Propeller Div., E. Hartford, Conn., propellers, Navy, \$45,000.25.

Julien P. Friez & Sons, Div. of Bendix Aviation Corp., Baltimore, Md., radiometerograph and ground equipment, Army Signal Corps, \$21,870.00.

Glenn L. Martin Quarter, \$744,037

Glenn L. Martin Co., reports for the quarter ended June 30, net income of \$744,037, or 79c a share, as compared with a net of \$186,838 or 21c a share in the June quarter of 1937, and \$628,563 (72c a share) in the first 1938 quarter. In the six months ended June 30, net income was \$1,372,600, or \$1.46 a share. For the same 1937 period it was \$526,307, or 61c a share.

Sperry-Intercontinent Data

Sperry Corp. announces to the SEC that on July 29 a wholly owned subsidiary, Intercontinent Corp., redeemed 220 of its 250 outstanding capital shares by distributing most of its assets to Sperry Corp., which then sold the remaining 30 shares to other interests. Intercontinent Corp. has been a commercial representative and foreign sales agent for American aircraft manufacturers.

Brazil Wants Plane Plant

An aircraft factory at Lagoa Santa in the Brazilian state of Minas Geraes has been authorized by the country's chief executive. Bids covering both installation and operation of the plant will be prepared by the minister of transportation and public works, and considered by a commission of directors of military and civil aviation, treasury officials and the minister of transportation, the American commercial attaché at Rio de Janeiro reports.

Stock Holdings

Following is official summary of transactions and holding of officers, directors and principal stockholders of corporations with equity securities registered, filed with the Securities and Exchange Commission August 11-31. Unless otherwise indicated, transactions were made in July and holdings are as of the end of that month:

Brewster Aeronautical—James Work, officer and director, gave away 9,000 capital shares and 2,300 common warrants, leaving 118,104 and 22,700. North American Aviation—J. H. Kindeberger, officer and director, decreased 900 common to 19,300.

Pan American Airways Corp.—Harold McMillan, officer, decreased 400 \$5 par common to 146.

United Air Lines—Wm. A. M. Burden, director, increased 700 common to 3,536.

Western Air Express—L. H. Dwerlitz, officer and director, increased common 507 to 910 through management purchase plan.

Following is a tabulation of equity holdings filed by persons becoming officers, directors or principal stockholders of issuers having any securities registered:

Brewster Aeronautical (common warrants)	
Phillip M. Stephenson, officer	1,200 July, '38
Curtiss-Wright Corp.	
William F. Carey, director	none July, '38
Fairchild Aviation Corp.	
F. W. Lutz, officer	none July, '38
G. L. Terrill, officer	none Dec. '37
Kinner Airplane & Motor (common)	
F. L. S. Harman, director	1,097 July, '38
Penn-Central Airlines	
J. J. O'Donovan, officer	none July, '38
(capital)	
L. P. Arnold, officer	150 July, '38



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Certificates & Approvals

The Civil Aeronautics Authority has released the following list of type certificates, approved type certificates and approvals.

September 12-17

Piper model J3L granted type certificate 698. This model is similar to others of the current Cub series except for a Lycoming 50-hp. engine.

Sept. 5-10

Martin model 156, approved type certificate 697. Similar to plane approved under 537 except for increased standard weight.

Bellanca model 66-76, approved type certificate 563. Previously included only model 66-70.

Aug. 22-27

Type certificate 689 assigned to Beechcraft model F17D, five-place, closed land biplane powered with a Jacobs L-6 300-hp. engine.

Piper model J3F-50S, approved as a seaplane type under type certificate 682.

Type certificate 695, assigned to Piper model J3P, a two-place closed land monoplane, powered by a Lenape 50-hp. engine.

Type certificate 696, assigned to Taylorcraft model BL, a two-place closed land monoplane, powered by a Continental 50-hp. engine.

Type Certificates

The Harlow PJC-1, a two-place closed land monoplane with a Warner Super Scarab 50 was granted type certificate 689, Aug. 26.

Clark model F-46-A, a five-place low-wing cabin monoplane of wooden construction, powered with a Ranger SGV-770-B3 air-cooled engine of 420-hp. Approval No. 2.

Engines

Akron: Funk E-4, cylinder in line water-cooled inverted, 63-hp. at 2125-rpm. at sea level. No. 201, Aug. 12.

Aviation Mfg.: Lycoming R680E1, R680E2, and R680E3, 9 cylinder radial air cooled, 275-hp. at 2200-rpm. at sea level (E1); 265-hp. at 2200-rpm. at sea level (E2); or 265-hp. at 2200-rpm. at sea level (E3). No. 302, Aug. 29.

Lenape: Papoose 1-M-3, 9 cylinder radial air cooled, 150-hp. at 2200-rpm. at sea level. No. 203, Aug. 31.

Propellers

Beverl, L-42-A, wood and steel, 7-ft. 6-in. diameter, automatic pitch, 50-hp., 1900-rpm. No. 682, Aug. 31.

Equipment

Eclipse, auxiliary engine, 4-72, 3340X, 4-cylinder horizontal opposed water cooled, 21-hp. at 4000-rpm. at sea level, eligible as a power source for instruments, electric, and hydraulic systems. No. 106, Aug. 13.

American Airlines: safety belt, EDS-400, approved for one person. No. 107, Aug. 19.

Letters of Approval

Clark, F-46-A, 5-place closed land biplane, Engine, Ranger SGV-770-B3. No. 2-545, Aug. 18.

Spaded: Skylark W-1, 2-place open closed land monoplane. Engine, Warner Super Scarab, series 40. No. 2-546, Oct. 31, 1937.

Approved Type Certificates

Airlanes

Phillips 1-B, 2-place closed land monoplane, Engine, Menasco C-4. No. 693, Oct. 31, 1937.

Engines

Menasco: Super Buccanear C6S-4, 6-cylinder in line air-cooled inverted, 280-hp. at 2300-rpm. at 7500-ft. No. 197, Oct. 30, 1937.

BILL MANUFACTURING CO., Cleveland, with cooperation of Douglas Aircraft Co. engineers, has developed a new type patented rivet for blind attachment. The Lok-skrut fastener is said to provide new cost saving and safety advantages to aircraft manufacturers and repair stations. Uses include attachment of nacelle, wing and horizontal stabilizer fillets, interior upholstery panels, de-icer shoes, exhaust tail pipe fairing and shielding, wing tip to wing, hand hole covers, window and door frames, miscellaneous fairings, and conduit boxes.

RADIO NAVIGATIONAL INSTRUMENT CORP., 500 5th Ave., New York, has published an 8-page descriptive booklet on Simon Radioguide for aircraft. Technical data and photographs are included.

SOUTH BEND LATHE WORKS, South Bend, Ind., is distributing a two-color, 16-page bulletin (33-J) describing the 9-inch workshop lathe, for servicing and repairing planes, automotive vehicles, and general machinery. There are more than 50 photographs.

Aero Patents

Sept. 13, 1938

2,129,939: Propeller for Aircraft. Issued to Soren H. Juul, Outlook, Mont.

2,130,127: Goggles. Issued to Charles Fischer, New York City.

2,129,818: Air-Borne Gyrocompass. Issued to Leslie F. Carter, Leonia, N. J., assignor to Sperry Gyroscope Co., Inc., Brooklyn, N. Y., a corporation of New York.

2,129,846: Cooling system for Internal Combustion Engines. Issued to Gunther Knochenhauer, Lidings, Sweden, assignor to Aktiebolaget Spontan, Stockholm, Sweden, a corporation of Sweden.

2,129,930: Means for Injecting a Plurality of Motor Fuels into Internal Combustion Engines. Issued to Edmund E. Hans, Detroit, Mich.

2,129,946: Internal Combustion Engine. Issued to Harold Stewart Lamb, South Gate, Cal.

2,129,852: Antenna for an Airplane with a Metallic Body. Issued to August Leib, Berlin, Germany, assignor to Telefunken Gesellschaft fur Drahtlose Telegraphie m. b. H., Berlin, Germany, a corporation of Germany.

2,129,826: Fire Protecting Device for Air Cooled Engines. Issued to Jean Georges Dintilhac, Paris, France.

2,129,824: Aircraft Structure. Issued to Alexander P. de Seversky, Asharoken Beach, Northport, N. Y., assignor to Seversky Aircraft Corp., a corporation of Delaware.

2,129,653: Engine Starter. Issued to Frank J. De Niro, Erie, Pa.

2,130,270: Goggles. Issued to Rosekeim G. Dispensa, Ashtabula, Ohio.

Sept. 20, 1938

2,130,504: Aircraft Structure. Issued to Joseph L. McCane, Hempstead, N. Y., assignor to Seversky Aircraft Corp., a corporation of Delaware.

2,130,582: Aerofoil. Issued to Adam Craig, Toronto, Canada.

2,130,568: Parachute Apparatus. Issued to Floyd Smith, Buffalo, N. Y., assignor to Irving Air Chute Co., Inc., Buffalo, N. Y., a corporation.

2,130,367: Illuminating Means for Indicating Instruments. Issued to Gregory V. Ryals, New York, N. Y., and Stephen Cerstvik, Union, N. J., assignors to Bendix Aviation Corp., South Bend, Ind., a corporation of Delaware.

2,130,914: Shock Struts. Issued to Kenneth W. Warren, South Bend, Ind., assignor to Bendix Aviation Corp., South Bend, Ind., a corporation of Delaware.

2,130,547: Parachute Harness. Issued to Leslie L. Irvin, Letchworth, England, assignor to Irving Air Chute Co., Inc., Buffalo, N. Y., a corporation.

2,130,567: Parachute Apparatus. Issued to Floyd Smith, Buffalo, N. Y., assignor to Irving Air Chute Co., Inc., Buffalo, N. Y., a corporation.

2,131,018: Ignition System for Internal Combustion Engines. Issued to Lloyd H. Scott, Sidney, N. Y., assignor to Bendix Aviation Corp., South Bend, Ind., a corporation of Delaware.

2,130,881: Wheel. Issued to Frederick C. Frank, South Bend, Ind., assignor to Bendix Products Corp., South Bend, Ind., a corporation of Indiana.

2,130,884: Carburetor. Issued to Theodore Jean-Baptiste Lafitte, Paris, and Enogat Pradier, Clichy, France, assignors to Bendix Products Corp., South Bend, Ind., a corporation of Indiana.

2,130,918: Helicopter. Issued to John B. De Stefano, New York, N. Y.

111,330: Design for a Landing Gear. Issued to Carl G. Seyferth, Muskegon, Mich.

2,130,666: Fuel Supply Device for Internal Combustion Engines. Issued to Irvan E. Coffey, St. Louis, Mo., assignor to Carter Carburetor Corp., St. Louis, Mo., a corporation of Delaware.

2,130,569: Parachute Apparatus. Issued to Floyd Smith, Buffalo, N. Y., assignor to Irving Air Chute Co., Inc., Buffalo, N. Y., a corporation.

2,130,564: Parachute Harness. Issued to Harold G. Rogers, Buffalo, N. Y., assignor to Irving Air Chute Co., Inc., Buffalo, N. Y., a corporation.

2,130,337: Carburetor for Internal Combustion Engines. Issued to Edward Trezise Bunt, Redcliffe, Bristol, England, assignor of one-half to Frank Edwin John Hill, Bristol, England.

Accident Reports

Accident reports on the following non-airline accidents have been released and may be obtained free of charge from the Director of Information, Civil Aeronautics Authority, Washington, D. C.

Arrow F, piloted by Leo G. Rinke, fell at Centerline, Mich., June 19, 1938. Two fatalities.

AVIATION STOCK TRENDS

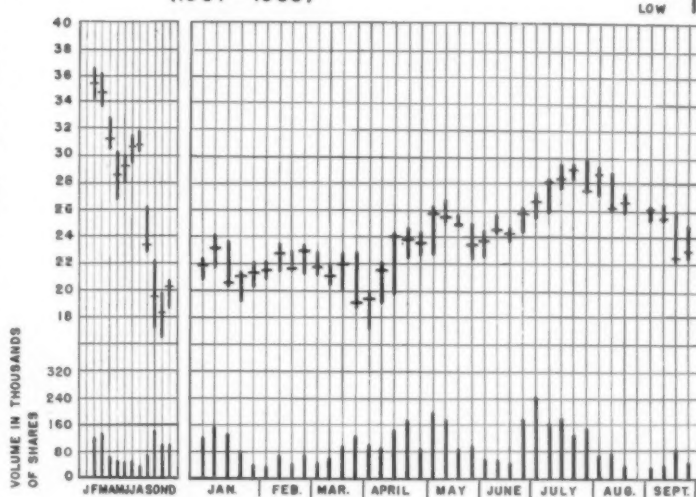
WEEKLY AVIATION AVERAGES
(1937-1938)

Chart Data Supplied by Wyckoff Associates, Inc.
Comments by Philip P. Friedlander

Wall Street, suffering from a bad case of war jitters, gave vent to its emotion, and started a general market decline, featured, not by a rapid thrust downward, but rather by a gradual easing down to lower levels. This retreat was featured by spasmodic rallies, sharp but of short duration. The Dow Jones Industrials, up to a top of 146, is, at the present writing, selling around 128, about 18 points off.

In contrast to the general market's behavior, the aviation stocks retreat: l very quickly, showing little rebounding ability. The move down was about 7 points, from 30 to 23. In the 23 area, or slightly under, there seems to be a good cushion of support.

Traders, nimbly watching for opportunities to buy and sell, could have made profitable swings by buying when the group entered the 23

area, and selling when the averages rallied to 25, or slightly under. Strangely enough, this sort of maneuver has been going on for several weeks. This parade backward and forward in a definite trading range seems to invite caution only because it has been so obvious and easy to discern.

The significance of these jiggles is not hard to interpret. It means that a base of some importance is being formed by the aviation group. Leading as it did the retreat, the aviation stocks are in a better position to lead in the next rally move. If war comes, there is no question but that aviation stocks will be found in the list of those securities that should later on find appreciable higher levels. If fortunately there is no conflict, it is still our belief that most of these equities are now in a bargain region, subject to later rapid appreciation.

NEW YORK STOCK EXCHANGE

	Week Ending Sept. 17				Week Ending Sept. 24			
	High	Low	Net Change	Sales	High	Low	Net Change	Sales
Aviation Corp.	4 1/8	3 1/8	- 1/2	12,400	4	3 1/2	+ 1/8	5,900
Bendix Aviation	23 1/4	17 3/8	-3 3/8	62,700	21 5/8	18	+ 3/8	39,900
Boeing Airplane	24 3/8	19	-2 1/8	17,400	23	20	+ 3/8	9,100
Consolidated Aircraft	13 1/8	10 1/2	-2 1/8	8,400	12 1/4	11 1/4	+ 1/4	3,900
Curtis-Wright	5	4	- 1/2	56,100	4 1/2	4	+ 1/2	25,800
Douglas Aircraft	22 1/2	18 1/2	-2 1/4	19,400	21 1/4	18 1/2	+ 3/4	11,300
Ex-Cell-O	46 3/4	39 1/4	-5 1/4	20,600	44 3/4	40 1/4	+ 4	14,200
Glenn L. Martin	15 3/8	11 3/8	-2 1/4	6,200	14 1/4	12 1/8	+ 1	2,700
Natl. Aviation Corp. .	22	18 1/8	-2 1/2	16,000	20 3/4	18 1/8	+ 1/4	9,800
N. American Aviation	8	6 3/4	- 1/8	2,700	7 1/4	6 1/2	.....	1,100
Sperry Corp.	8 7/8	7	-1 1/4	25,000	8 3/4	7 1/2	+ 1/2	14,200
Thompson Products .	25 1/4	22 3/4	- 1/4	36,900	25 1/8	23	- 1/4	27,000
TWA	18 1/2	15	- 3	2,800	18	15 3/4	+ 1 1/2	2,500
United Air Lines	7 1/8	5 7/8	-1 3/8	7,000	7	5 3/4	+ 1/2	5,900
United Aircraft	9 1/8	7 3/8	-1 1/8	18,700	8 1/2	7 1/2	+ 3/4	10,800
Wright Aeronautical .	26 1/8	23 3/8	- 2	21,800	25 1/8	23 3/8	+ 1/8	12,000
	87 1/2	72 1/2	-12	290	86 1/2	78	- 1/2	500

NEW YORK CURB EXCHANGE

	Week Ending Sept. 17				Week Ending Sept. 24			
	High	Low	Net Change	Sales	High	Low	Net Change	Sales
Aero Supply A	18 1/2	18 1/2	- 1	100	.....	.....	.....	.....
Aero Supply B	3 1/2	2 3/4	- 3/8	900	3	2 5/8	- 1/8	200
Air Associates	9	8 1/2	- 1/2	200	8	8	- 1/4	100
American Airlines	14 3/8	10 3/4	-3 3/8	2,900	12 1/4	10 3/4	.....	900
Aviation & Transp. .	1 3/4	1 1/8	- 1/8	2,100	1 1/8	1 1/8	.....	3,300
Beech Aircraft	13 1/4	15 1/8	- 1 1/8	500	15 1/8	15 1/8	.....	100
Bell Aircraft	11 1/8	11	- 1/8	300	12	10 1/2	+ 1	400
Bellanca Aircraft	6 3/8	5 1/8	- 1/8	3,600	5 3/4	4 3/4	- 3/8	1,300
Breeze Corps.	4 1/4	3 3/4	- 3/4	1,300	3 3/4	3 1/2	- 1/4	800
Brewster Aero	5 7/8	5	- 3/8	3,100	5 1/4	4 1/4	- 1/2	2,400
Fairchild Aviation .	5	4	- 1/2	1,900	4 1/2	4 1/2	+ 1/2	2,100
Grumman Aircr. Eng.	12 1/4	10 1/8	-1 1/4	3,500	11 3/4	10 3/4	+ 1/2	2,800
Irving Air Chute	14 1/8	11 1/2	- 3/8	1,500	12 3/8	11 1/8	+ 3/8	400
Lockheed Aircraft .	14	11 1/8	- 3/8	12,300	13 1/8	11 1/2	- 1/8	4,900
Pan American Airways	14 1/8	12 1/8	-2 1/4	2,400	13 1/2	12 1/8	.....	2,500
Penn Central Airlines	4 1/8	4 1/8	- 1/8	100	.....	.....	.....	.....
Seversky Aircraft	2 1/8	2	- 1/8	2,300	2 1/8	2	.....	2,100
United Aircraft War .	8 1/4	5 1/8	-2 3/4	7,300	6 1/8	5 1/8	+ 1/2	3,500
Waco Aircraft	2 1/8	2	.....	200	.....	.....	.....	.....
Western Air Express .	2 3/4	1 1/8	- 3/8	1,100	2 1/2	2 1/8	.....	500

NEARLY 50,000,000 MILES EVERY ONE ON TEXACO!



TWA Sky Chiefs make but 3 stops, coast to coast. TWA operates the only through Skysleeper between Chicago and Los Angeles.

Fly National Air-Travel Week Oct. 1-9



Not only has TWA used Texaco Airplane Oil since 1931; it has used Texaco Aviation Gasoline for the past 6 years. TWA is today using Texaco 100%.

THAT'S the scheduled mileage flown by TWA and its predecessor companies . . . since 1931.

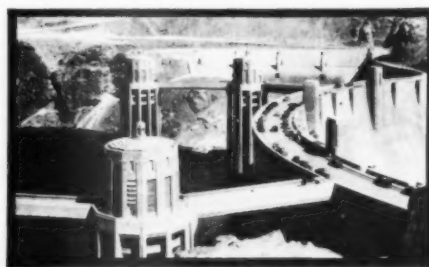
Then they weren't flying Douglasses, as they do now. Then they weren't flying upwards of 30,000 miles a day, as they do now. But they *had* begun to use Texaco . . . and have been using it ever since.

And as TWA climbed to the position of one of the foremost airlines of the nation Texaco climbed with them . . . until today—

More scheduled airline mileage is flown with Texaco than with any other brand.

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TEXACO



Aviation GASOLINE